THAT MIND OF YOURS

DANIEL BELL LEARY

C. E. Ashcraft Jr.

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THAT MIND OF YOURS

A PSYCHOLOGICAL ANALYSIS

BY

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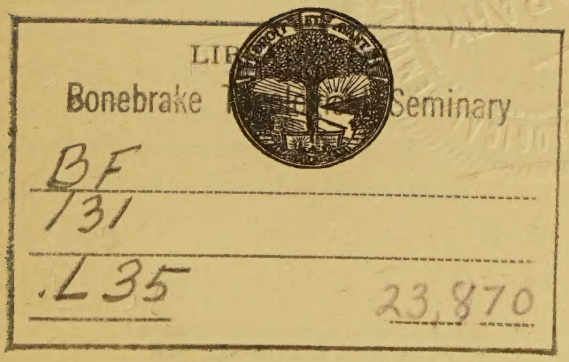

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FOREWORD

THE title of this book is that of a series of daily articles which have been running in the *Buffalo Evening News* for the past four years. They had their inception in a mutual interest of the editor and the writer to present the newer knowledge of human nature to the general reader. Their continued publication, lasting far beyond the original expectation, has led the writer to believe that there is a real need for this simplified but scientific presentation of the newer knowledge of man. And the writer wishes to acknowledge here the courtesy and kindness of the *News* both in fostering the project and in permitting the use of the title for this little book.

Buffalo, N. Y. D. B. L.

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TO THE READER

"The Path of Life, men said, is hard and rough
Only because we do not know enough.
When Science has discovered something more
We shall be happier than we were before."

HILLAIRE BELLOC.

I AM not sure, but I suspect that Mr. Belloc was indulging in a quiet laugh at the expense of his scientifically indoctrinated readers when he put out these little couplets. And, too, I suspect that the Man in the Street, Mr. Average Reader, believes too implicitly and uncritically in the thought so nicely expressed. It will pay us, right in the beginning, and before we get into the details of our subject, to set ourselves right on this point. Knowledge can and will make us happy. With that statement I am in entire accord, but it is not just wordy knowledge, not just linguistic phrases which will solve our problems, but a knowledge of how to feel rightly, act correctly, as well as, but not merely, to think logically.

Modern psychology has placed a tremendous emphasis on other things than just thinking, and this little book will stress that emphasis. We all think and we all know that

thinking can create as many problems as it solves. This should not, as so often happens when no other roads to escape are known, result in pessimism or mysticism. We should not fail to think, but we should get the right material with which to do that thinking. We should see to the emotions, the physical condition, the daily behavior and all those other aspects of human beings which modern psychology, at last, has come to emphasize.

We live as a unit; body, mind, memory, muscles, glands, blood and bones, nerves and nerve cells, all contribute their share to the leading of a happy, creative, progressive life, and we cannot do the job by paying too much attention to merely one or two of the sides of our natures and neglecting the others. 'All for each and each for all is a good maxim for the student of modern psychology to use as a guide to the understanding of human nature. The old piecemeal attitude is bankrupt, and the new is daily demonstrating its theoretical accuracy and its practical value in every direction. The newest and most wonderful discovery of the modern age is Man. When all is said and done, nothing else counts, for all the machinery of modern civilization is but the means to

health and happiness or the reverse. Science is for the sake of man, not man for science.

This little book is, in a sense, the story of modern psychology; that is, it is a running narrative of what psychology is, with an explanation of its problems and their solutions as modern psychologists see them. It is not a textbook, for it is not big enough, though references to the larger and more detailed treatises are naturally given. It is written in the hope that it will enable the modern reader to see through the eyes of the modern psychologists, to get their slant on human nature, to see solutions and plans as they see them, to work with them, in a sense, since they will then understand them, toward that better life the making of which would alone justify the delving into human depths.

Small as it is, it endeavors to cover the whole field, running the gauntlet from normal to abnomal and back again, and endeavoring always to see the field as a unit, to let the various aspects develop out of the narrative rather than to follow a stiff and more or less technical outline. And it is dedicated, affectionately, to that mythical yet real animal—the Man in the Street and his worthy feminine counterpart.

THAT MIND OF YOURS

I

THE PROBLEM

One fine day, your neighbor, a sober, industrious, somewhat reserved man of, say, forty years, finds himself disinclined to go to business. His business is flourishing; he has built it up from nothing by hard, long-continued work. Lately, he has lost interest. He has felt disinclined to thinking. His home no longer pleases him. He finds his wife a bore, and his children a nuisance. He begins to dream strange dreams. He states that his life has been wasted, that he is unhappy, yet can point to nothing concrete to justify this. He cuts his friends, becomes suspicious, thinks that people in general are plotting against him, that people are watching him and running him down. He becomes morose, won't talk. The physicians called by a solicitous wife find nothing wrong. They suggest a vacation, a diet, play, travel, but the man carries with him,

whether to the golf links or to other places, the same attitude of mind. He is, literally, no longer himself.

This is a picture, happily rare but becoming unfortunately less so, of a type of maladjustment to life and all that that implies. Other pictures will suggest themselves; neighbors, relatives, friends, self, where strange changes have taken place and the whole character of a man or woman has altered, almost overnight, it would seem to the uncritical eye. These changes, strange as they are, are but the exaggerated picture of what happens to all of us. To-day we are merry, happy, intent on work, full of energy and plans; to-morrow all has evaporated. Yet we can, seemingly, point to little or nothing that has brought about the change. Even if we do try to put a finger on the cause, we are, in nine cases out of ten, wrong. Then, as suddenly, we are again our own sweet selves.

It is foolish to be morbid about these things, or to charge them to an evil fate, a shadowy heredity, a peculiar nature, a harsh world. We need to study out the causes and the train of events, and when we do so we are dealing with that new and wonderful knowledge called

modern psychology. It tells the most fascinating story of modern times, fascinating because it talks about that most interesting of all subjects—Your Own Self. When we do thus study the self, and find out what it is, the troubles and the perplexities we have sketched above can and do vanish. Psychology aims to tell us about human beings, their nature, their nurture, their talents and defects, how to train them, how to insure, to some extent at least, their progress and happy growth, how to understand and develop their abilities and to guard against their disabilities, to measure them and to enable them to understand their neighbors, the other humans.

Whether we seem strange to our own selves or not, other people do seem strange to us very often. How many mothers, loving, even idealizing, their sons and daughters, are able honestly to say that they understand them? These modern children, these petting parties, this knowledge of all sorts of things that Mother didn't know even when she was safely married! And the way marriage is going on the rocks! The unheard of changes in church and religion! The queer things they are doing in schools these days. The newspapers are just

full of horrible things, morbid things: murders, bootleggers, suicides, marriages, divorces and re-marriages almost overnight, girls doing things no nice girl would have done in Mother's day. So much haste, haste and more haste. Money-mad, pleasure-seeking world that it has become. No stability, no solid foundation, nothing like it used to be. Where are people going?

It is not necessarily the old-fashioned fogies who talk this way. There was and is merit in some of the old ways just as there is merit in some of the new ways. However, how is one to tell the meritorious from the undesirable? How is one to guide one's own steps let alone dictate to others? Again, that understanding of human nature which the new psychology gives is the only answer. What people are, the way they have been trained, the desires, conscious and unconscious, which they have and try to satisfy—through these things alone can any answer be given. The crowd has a psychology even as has the individual; in a sense the crowd is merely a lot of individuals teasing each other along, and seeking in each other's acts the justification for their own which they would never have attempted all by themselves.

Are there any real standards any more? Yes, there are just as good standards as there ever were, though people are ignoring them just as they used to do, but in a different way. Humans have never yet based their lives and their conduct on something really solid and enduring; they have sought sand-hill after sand-hill to build on, and inevitably found themselves, individually and socially, slipping, slipping. There are real standards, real bases on which to build, the only trouble being that until recently we did not know what they were. Now we do, in part at least, really know what human nature is and what sort of a life it should live, how it may be kept well, happy, balanced, and progressive. This is the story of modern psychology.

II

THE POINT OF VIEW

THERE are many ways of looking at human beings. We can view them religiously, as souls to be saved; we can view them economically, as machines that do work; we can look at them biologically, as a species of animal. Our viewpoints will cross and mingle, quarrel among themselves, use logic and non-logic to prove their rightness and goodness. But there is one test which we can apply to them all, namely: does this way of looking at human beings, this viewpoint for understanding them, do violence to the facts? Can it be proven by experiment and laboratory research? Is it just a blind guess, more or less colored by prejudice, tradition, hope, fear, and idealism? Does it consider the whole man?

It is well known that medical science has succeeded, through its study of hygiene and prevention of disease, in tremendously lengthening the average span of human life. But, it is proper to ask, of what use is a long life if the

life is not intrinsically, in itself, worth the living? Psychology steps in here and turns attention to the qualitative side of life and adds quality to make the life that is long, good. Naturally, psychology and medicine overlap, as is the case, also, with other sciences, notably biology, physiology, and chemistry. Where the medico, however, looks first and foremost to the welfare of this or that organ or structure of the body, the psychologist looks to the welfare of the whole man or woman. Psychology does not ask, is the heart well, are the lungs good? It asks rather, is the man, the woman, the child, properly adjusted to the environment, social and physical; is there friction, is there progress, is there growth, is the whole organism functioning properly? Psychology does not ignore the quantitative or the individual organs, as we shall see, but its ultimate emphasis is on the functioning and the welfare of the whole organism.

There are many definitions of psychology —too many. Many of them, however, when divested of ornamentation and high-sounding phrases reduce to much the same thing. We shall go about it the other way and build up one from the simplest form. In this sense, we

can say, first, that psychology is "a point of view." It is a way of looking at human beings and their conduct. It is not the only way, of course, as we have shown, but it is one way, a modern way, a good way.

To look at human beings psychologically is to look at them without pride or prejudice; it is to look at them as they are, to see the facts and ignore the fancies, to base conclusions on scientific observation, laboratory measurement, to believe only with proof and not on the basis of hope, tradition, authority, or emotional predispositions. Of course, when the task of psychology is rightly done, many facts from other ways of looking at humans come into play, for man, whatever else he is, is also religious, an economic worker, an animal. And this is quite as it should be, for psychology in its point of view endeavors to see all the man and to see that all in correct proportion, part by part, related to the whole.

There is another aspect to this psychological point of view. It is not a mere static, sterile thing. Psychology aims at such knowledge of human nature that it can mould, change, better, that human nature. Psychology aims at understanding for the sake of edu-

cating, reëducating, curing, developing human nature. This, again, is a trait particularly modern, even as the older psychology was largely merely descriptive.

Psychology, then, is a point of view, a way of looking at humans so that everything about them is duly taken into proper account, and such a way, too, that no mere catalogue of traits results, but a scheme for bettering human nature. This psychology is scientific in that it is founded on fact, not fancy; observation and measurement, not dreams, hopes and emotional prejudices. The human being is an organism which acts as a unit, which has relations to other animals physically and psychologically, and is therefore to be understood in terms of its past and its evolution as well as its present and its future.

Psychology looks at yet another problem that the other sciences have either ignored or stressed insufficiently, namely: man's origin. Suppose one were to raise a particular type of animal or plant for many, many generations in an environment, say, of the tropics, with a simple life, few problems other than those of food, shelter and children, and when they had become perfectly habituated to such surround-

ings and such doings, transport them to a cold, highly complicated life where all sorts of traps and enemies existed, and where the simplicity of the former mode of living would be completely replaced by a detailed, harassed search for wealth and property. Would there not be trouble? In a sense, that is what has happened to human beings. For untold generations our ancestors lived in a relatively simple environment, in a very simple form of society, with interests and pursuits that were really natural in the true sense of that much-abused term. Civilization has changed all this without also changing the animal. We have the same endowments, the same nature, the same brains, the same emotions as those long-ago ancestors, but we live in an environment so different, that there is really nothing by which to compare one with the other. Our cities, our means of locomotion, our enjoyments, our need for artificial exercise, perhaps the most surprising of all our new tricks to a savage, our mad chase for wealth and renown—all this puts a strain on the organism that it was literally not built to endure. What we have in the way of abilities was designed to make us a success in that olden world, not in this.

All this is not to say that we must return to barbarian culture. We cannot and we would not. It does mean, however, that we must learn to make our civilization of such nature that the organism evolved so long ago and under such different circumstances can and will live well, live long, and live happily once more. Any animal, man, or the so-called lower animals, must have a cage that suits his nature. We have put ourselves into a cage that is quite unsuitable, and we must find a way to build a new one. This again is the task of psychology: to so understand human nature and its needs that a type of civilization can be framed, together with a type of society, wherein human nature can function properly. A fish out of water is not worse off than we humans sometimes are when we confront problems, not of our own making, but which have been wished on us by society and which we have no means of solving, because we are not that kind of animal.

As should now be evident, in spite of all the hard and technical definitions that can and have been given it, psychology is a very human and a very necessary study. Technically speaking, psychology is the science of human conduct,

which statement when taken in the light of all that has been said above in explanation of this definition, suffices to summarize the point of view of the new science. It is science, which means that it is accurate, based on the laboratory and on experimentation. It is of human conduct in the largest sense of the words, of man's conduct as man, not just as business man, as husband, as idiot or as inventor. It aims at making that conduct more and more conformable to the environment and the environment more and more suitable to that nature so that the result is a life, long to be sure, but also worth while to the animal living it.

III

THE NORMAL HUMAN BEING

We all, with rare exceptions, hope we are normal and try to be so, however roughly we accomplish that purpose. That is, there are certain norms or standards or averages to which we conform or try to conform. It will best suit our purpose to examine these norms before we consider the abnormal, namely the departures from the average. To make a comparison, we should first know how an automobile should run when in proper condition before we can estimate what is wrong with one that will not run correctly. It is true that this also works backwards, and that we have learned, as professional psychologists, much about the normal by studying the abnormal, as the doctor learns about health by studying the conditions of disease. However, apart from laboratory methods it is best to start with the average, the regular, the ordinary, the everyday, or what we have termed the normal.

Examine yourself. What do you find?

If you are normal, you will find a body, and you will claim a thing called a mind, which it is our purpose to examine in some detail later. If you examine the body more closely, you will find that ordinarily you have ears, eyes, muscles, arms and legs, a tongue, a nose and a host of other similar organs of which even cursory examination reveals the use. You cannot go inside your own body, but were you to study anatomy you would soon find out that there are innumerable other organs packed away in various sections of the body whose functions are quite as important as are those of organs perceptible to mere outer examination. We will consider the outside structures first, or rather those whose existence is shown on the surface, for, of course, they have their inner structure also. Most of these are what we call sense organs, organs of sensation, and sensation is a most important thing in life.

Sensations! Without sensations we would be nothing and would do nothing. Conceive of yourself touching a hot stove without realizing that it is a stove or that it is you touching it. That would be a sensation. Or imagine a drop of lemon juice put on your tongue without your knowing what it is or that it is your

tongue that is being stimulated. That too would be a sensation, but it is quite evident we, none of us, except for a brief time as very young babies, and maybe not even then, have had sensations in this sense. Sometimes we approach this type of experience even now when we hear a vague noise, and cannot identify it, and are perhaps half asleep anyway. As soon as we awaken and place the sound it is immediately more than just a sensation.

The first time a cat comes into the world of experience of a child, let us suppose that the cat is merely seen, as a blotch of color. The child does not know what a cat is as yet; it sees the blotch of moving color. The next time it sees the same cat, it sees more than it did the first time, for it sees in relation to that first time as well as for the new moment. That is, each new sensation leaves a so-called trace, or modification of the organism so that the next occurrence of the same or similar sensation is reacted to in terms of the previous as well as the present experience. Let us now suppose that the next experience of the cat is seeing plus hearing. The cat mews as well as allows itself to be seen. Now the child has two sensations linked together by experience.

This one linking may not suffice to fix, indelibly, the connection between the sound and the sight, but in time, the sound will call to memory the appearance and the appearance the sound of the animal. Now let us add the touch sensation of the fur. By this time the experience in all its details of cat is getting rather complicated, and the name will also have been learned, let us say. Now, when the child sees the particular patch of color, it can say " cat "; likewise when it touches it in the dark or hears it calling, the sensation will have a meaning and will no longer be a pure, meaningless sensation.

Many modern psychologists do not start, in their texts with a discussion of sensation at all. Some of the more radical writers do not even mention the subject. Yet, so insistent and persistent are sensations in the life and experience of each of us that it has seemed best in this non-technical presentation of the subject to begin with sensation as a theoretical basis and to show its relation to other factors which, while more complicated, are also, in a sense, more real. For, as we have seen, we do not as adults have sensations in any simple sense, even though, in the case of new-born and unsophisticated infants, we

may conceive of such theoretically pure experiences. To put it more simply, every time a sense organ is stimulated we have a sensation-plus-a-realization-of-meaning, and also, usually, a tendency to react, objectively, to that experience in an habitual, or purposive or meaningful way. In short, we really, as adults, always have perceptions, and this is undoubtedly also true of even the youngest children, though on a much simpler plane. We react to every stimulus from the outside world *via* our sense organs not only in terms of that stimulus but in terms also of all or at least of a large part of our prior experience of that stimulus or similar or related stimuli, and also in terms of our purposes and intentions at the moment of stimulation. This is, roughly, the significance of the so-called contemporary doctrine of "*gestalt*," *i.e.*, that the organism due to past experience, always reacts in a complex, meaningful, purposive way to each and every stimulus which it receives from within or without, so that reactions are as much a result of past experience and present purpose as of the stimulus itself. This is emphatically good psychology and emphasizes a

much-needed point concerning the unity of the organism and the organization of experience.

There are sensations which have their origin, that is, the stimulus, in what we call the outside world, the world of things and so-called natural forces. On the other hand, there are sensations which have their origin within the organism itself, these are quite as important as the others. It must always be remembered that one cannot say that any aspect of human nature is all-important; it is the inter-play and the coöperation which are essentially most significant. Exponents of this and that " ism " are wont to exaggerate the relative merit of the functioning of some particular gland or organ in which they are themselves tremendously interested. It is safe and sane to remember that the whole organism with its inter-play of parts is the real thing of interest to the psychologist, not the separate parts except in so far as modifying them will lead to better adjustment of that whole organism.

Sensations, both in the primitive sense of just sensation without added meaning due to experience, as well, of course, as those with meaning are the building-stones of our whole life and activity. Without our sense organs, we

should never have cause to have any knowledge of the world we live in at all. A child born without any ability to sense (a supposition impossible to realize, of course) would never move, feel or think, would never mature, would in the real sense of the words not be an organism at all, for this sensitivity is one of the distinguishing traits of what we call an organism.

Our sensations, then, give us the first touch with the world. They are the crude beginnings from which even the philosopher and statesman build up, through the year and with much error, their final philosophies of life. These are the psychological atoms, to use a figure of speech, that we must not push too far, from which we build the more complex thoughts and attitudes which distinguish the adult and mature individual from the child.

As we grow more and more mature, sensations become more and more meaningful. When the theoretically meaningless sensation has achieved meaning, so that it is always a this or a that, a there or a here, with more or less definite recollections and memories, when the child begins to recognize and respond to the cat as a cat, then we have what we call

perception. That is, roughly speaking, sensations with meanings are perceptions. Much of our waking time is spent in answering and responding to this sort of thing. We perceive the time of day, the food we eat, the people we meet, the buildings and the cars we come in contact with, and a thousand, thousand other things all day long. All, be it noted, through the sense organs without which we would not have made the beginning which we now see becomes very soon much more complicated.

And there is still another step. Let us suppose the child, as his field of experience grows wider and wider, sees several cats: white ones, black ones, cats that are thin and fat, big and little. He is told they are all cats. By and by, subject to many errors, the child finally achieves the abstract understanding of cat, *i.e.* gets an understanding of what it is that makes a cat a cat as compared with what makes a dog a dog. Not a learned knowledge, not a knowledge of biological structure or anatomical principles, but a common-sense understanding of what we might call the "essence of cattiness." Then, still later, when the child visits the zoo and sees the lions and tigers and other members of the cat family, the concept,

as it is called, of cat, grows still more and we need not be surprised when the child some day announces, as proof of his understanding, that the little girl next-door is a cat!

From sensation to percept and then to concept is the growth of the understanding, but it is all based on the original and still continuing simple experiences, which all the time acquire more and more meaning. This meaning is a somewhat complex thing, but it can be, perhaps, simply illustrated. If you ask some one what is the meaning of the word "cat," he will in all probability answer in dictionary terms, *i.e.* give a definition. But the real "meaning" of cat is all the sensations, memories, experiences and habitual acts connected with actual comings in contact, one way or another, with cat. The real meaning is that complex of previous experiences and reactions. The words are another story and tend, to the psychologically unenlightened, to complicate and distort the picture.

Another way of looking at the complex situation which comes to pass when we perceive or have an experience is to consider it in the technical terms of S—R, which is psychological shorthand for the statement that a

S-timulus leads to a R-esponse and is connected therewith by a bond (—) between them, which bond is a complicated system of nerves, cells, brain areas and the like. Let us look a bit closer at all this, without becoming too involved in the details of what is called, roughly, the nervous system. When a stimulus strikes the sense organ and its receiving cells and apparatus, the change set up there, whether we call it mechanical, electrical or both or chemical or a mixture of all three, that change or influence or modification in turn modifies the cells of a nerve or nerves leading from the sense organ to some higher centre, perhaps to a part of the brain itself. That cell in turn stimulates the next and so on; like a row of wooden soldiers each cell tips off the next until the stimulus, in some modified form, reaches a centre of redistribution and reorganization. There, in the light of the modifications which previous similar and related experiences have affected, it is redirected and finally, a new current or result begins, in the same manner, to go outward, finding its final effect in the movement of muscles that change the posture or position or result in the saying or the doing of some specific thing. Some such outgoing

messages may, to be sure, originate within the organism from inner sensations, or from what we call thinking which, as we shall see, is a sort of delayed reaction. Some of the ingoing stimuli may result in thinking with no immediately apparent objective movement or result. Going back to the S—R formula, we now see that the bond between the S and the R is the nervous system, not usually in the form it was created, but as it has become by previous experience.

This nervous system and the muscles and sense organs are definitely connected, part by part, with each other. This requires further explanation. We must not go back to the old "bump" phrenology, for the brain, one division of the nervous system, is not dependent particularly on its size or shape for its efficiency. The cortex or surface of the brain, a sort of covering a fraction of an inch thick, is thickly strewn with gray cells, the so-called gray matter, and all these cells connect by thread-like nerve structures with other cells and other sections of the cortex. It is the relative number of such cells and their relative complexity of inter-connection, their actual health and biological and chemical normality

which, plus the other functions of the other organs of the body, accounts for intelligence. Remember, always, though we often forget, a brain cannot, all by itself, think, any more than a muscle all by itself can move. It requires the exact coöperation of many organs and structures to do anything, so that it is more correct always to say, the animal thinks, the animal moves, the animal looks, than to say a muscle, a sense organ, or a brain does it.

To put all this still differently, we can say that the organism has its gathering apparatus, the sense organs, its sorting apparatus, the brain and other centres, and its doing apparatus, the muscles. All life is a response, in terms of previous experience, to stimuli which are being constantly received. All life is dynamic, constantly adjusting itself to the demands of the environment and its own needs. Some responses to stimuli may be delayed, as when we are given a puzzle which we just monkey with, though even then the monkeying is a response though not the final one to the stimulus. Indeed, we may never reach a final and settled response; many questions are raised in our minds, figuratively speaking, which are never completely solved. All the

stimuli, however, end in action or adjustment directly or indirectly, now or some time later. Sensitivity is the essence of organic life, and the ability to put out the proper response to a given stimulus spells success or failure, on a higher or a low plane.

We said above that the responses which the organism makes through one or another channel are due to the stimuli which it receives from without or within as may be. That is, the constant effort of the organism is to adapt itself to the demands of the environment and to the satisfying of its own needs. The organism is driven by necessity from without and from within. It is an interesting, an important, but a difficult question to decide on the relative strength and the inter-relations of these two large groups of stimuli. Suppose, for example, that some one calls your name. You hear it, but you are not forced, except under out-of-the-ordinary circumstances, to respond in any open objective way. You can hear and not outwardly heed simply because you may be intent on some inner problem. On the other hand, if a hot object is brought into contact with your skin, even though you do not know of its approach and though you do

not immediately know what it is, you simply have to respond, allowing again, to be exact, for possible but improbable exceptional conditions. There are some stimuli which have preference, some which are relatively unimportant, some which must be answered if the organism is to remain intact and alive.

These all-important needs, which simply must be answered, constitute the real drives, the real moving factors of the organism and its career. All life, however complicated, and under whatever conditions, so long as it is life, must of course, have food, air, water, and the like, but must also attend to some simple stimuli which we will now discuss. That is, there are certain reactions which are so necessary for the mere existence even of the organism, that we are born to "go off" in a certain way when we are stimulated in the proper manner and without having to wait to learn how to thus react. Thus, for example, no baby that is going to live has to be taught to breathe, to swallow, to sneeze, to vomit, to cough, to blink, to cry, to move, to do a hundred and one things that are, as we have said, the necessary basis for mere existence and for the acquisition of those more

complex and complicated reactions that are learned on the basis of experience.

These reactions are called, technically, reflexes, and their mechanism does not involve the brain but a sort of sub-brain of which there are many located in the spine. These reflexes are what we call inborn, native, unlearned; they are, on the whole, necessary to life, are with difficulty, if at all, brought under conscious control and do not need what we call conscious supervision to do their tasks. There are, however, certain other more complicated acts or tendencies which are also, at least partially unlearned. There is considerable current discussion concerning these, the so-called instincts, but we can illustrate and define here without doing violence to the current investigations. A bird without being taught, can and does when the proper time comes, biologically speaking, build a nest. The bird does not take lessons in nest-building; it is not told now is the time to build; it is not threatened, warned, coached or instructed. In fact, the bird may be so young that this is the first nesting time. There may be no other birds in the neighborhood. But, and here is the important qualification, the bird will not necessarily build just

as his ancestors did. It may use cotton and thread, cloth and match-sticks, instead of leaves and twigs; it may build in a house crevice instead of in a tree; it may build larger or smaller, but build it will from inner and outer stimulation that sets going a complex reaction that is due to its own nature and inheritance. It will not reason, but act. There is, perhaps, more or less consciousness accompanying the act; it can, as we have said, be modified by experience. The second nest will perhaps be better than the first.

Such a tendency to do something which is similar to ancestral doing under similar conditions and which, as a tendency, is inborn, innate, is all we need mean by an instinct. We should emphatically not mean a tendency to do exactly what ancestors have done, nor exactly at the same time, but rather a tendency to bring about roughly the same results under similar conditions, due to structure. Of course, as with the baby and the reflexes, this involves no abstract reasoning, no cogitation, no conferences; it is a reaction to stimuli, inner and outer, and like the reflexes helps in a general sense toward well-being and self-perpetuation and progeny. There are many such drives,

instincts or tendencies, all fitted to the doing of a certain act or tending to lead to the accomplishment of a rather definite job, but none exact; all are subject to the modification of experience; all subject to frustration; all subject to learning good and bad. Into the vexed question of just how many there really are, we need not enter. We may, however, state that there are probably many, that they are all valuable, that they can all be so modified by experience, particularly direct teaching and schooling, and that they form the basis of the developing character and personality. Thus, to instance a few, there is the tendency to so act or to so modify previous acts that the child gets the approving smile and voice of its companions. Seeking social approval and avoiding disapproval is strong in all of us early in life; if we cease to care about it, it is simply that our experience has, like that of the bird, modified our tendencies, overlaid them with later experiences. There is the tendency to collect, to wander, to seek company, to be attracted by the strange and new, to experiment, *i.e.* to monkey, to get food and shelter, to fight, to run away and so on. In a word, humans have at birth, and as they develop through childhood

many tendencies to act thus and so, which acts, on the whole, are such acts as have favored our ancestors in their struggle for survival and made it possible for them to have us, their descendants. It is necessary to stress the flexibility strongly. We do not all act, even as regards reflexes, as say each Ford acts, where almost exact detail of performance is expected. The variability of human inheritance, something we shall discuss later, is too much.

But there is still another inherited group of tendencies which we must thoroughly consider. Indeed, modern psychology is constantly laying more and more stress on this group, the so-called emotions. Were an adult, without psychological training, to list the number and kinds of emotions he would probably present a rather large and detailed list. The adult can feel anger, fear, love, envy, jealousy, chagrin, awe, shame, ambition, revenge, elation, depression, and perhaps a hundred other shades of emotion or semi-emotional experiences. Note, however, that many of these are not pure emotion, which we will shortly describe, but mixtures of memories, thoughts, sensations with some emotion to color

it. It was not so with us when we first experienced emotions.

Suppose you have in your keeping a young, healthy baby, of six weeks of age. Try holding its arms and legs, when it is awake, so that it cannot squirm and move about. Use force, but not enough to pain or hurt. What happens? The child will, in all probability, show what an understanding adult will recognize as "anger." It is not anger in the grown-up sense; there is no awareness of anger as anger on the part of the child. It is just another of those unlearned reactions to a stimulus. The child, by inheritance, has been built to act that way. Again, place a child of the same age and biological condition on a rug on the floor. Make a loud, really terrifying noise, terrifying, that is, as adults see it. The child may exhibit fear. Hold it up over a mattress and let it fall a few inches: same reaction, fear. Again, not a sophisticated fear as we adults know it, but a way of acting that we recognize as fear in the child. Once more; cuddle the child, stroke it gently, warm it against your body, make soft noises to it, and it gurgles and acts a third way which, if we see correctly, we

will recognize as a child's expression of the adult emotion of love or affection.

In other words, the unlearned abilities of the child are simple in this as in other directions. The child is able, when a proper stimulus is given it, to exhibit three main emotional reactions;—fear, rage, love. We must always remember that this exhibition is on a childish and not an adult level, however. It is most important to remember, too, as we can see when we look back on the situation of the bird and the nest-building, that the modification which these emotions may undergo is tremendous. Thus, while the child is angry at being held, or under minor discomfort and slight pain, is fearful, at being dropped and when in greater pain, and shows love when coddled and petted, when warm and well-fed, most decidedly these emotions are not called out by things which adults fear, love or become angry at. The adult's emotions are conditioned, due to the modification of experience; they have been learned as regards their mature expression though native in the primitive sense we have described. That we can and do fear, become enraged and show love is native; apart from the stimuli we have described, and some few

others not mentioned above, what we fear, become enraged at and love is learned. Thus we come, by experience and training, to show anger at slothfulness or prejudice; we are taught to fear the dark or thunderstorms; we learn to love, as we go through life, many different things and people. The ability thus to learn, however, is inherited. When we come to consider abnormal phenomena and the field of so-called Freudian psychology, we shall see the tremendous importance of the emotions in the learned, but badly learned sense.

To summarize thus far, we can say that we come into this world with a very complicated equipment of organs, nerves, muscles, sense organs, and glands, plus many other things, of course, which are of such nature, due to our long inheritance that they tend to react in a rather definite though generalized way when stimulated properly inwardly or from without. This native equipment is made up of reflexes, organic tendencies, so-called instincts and the three emotional abilities which we have described. We might note here that the reflexes are relatively simple, almost mechanical and, as we said, relatively non-subject to modification; the instincts are more complex and more modi-

fiable, more modifiable that is, as regards the final mature act which uses them as a basis; and the emotions are perhaps even more complicated as regards the distance they may travel from their early unsophisticated expression. The reflexes involve sense organs and muscles in their activity; the instincts and the emotions call for a much larger basis or organic structure, involving the glands and the whole outfit.

Of course, we must not think that in the new-born child, a certain number of reflexes, instincts and emotions are lurking, to rush out when the child is stimulated. A comparison with a piece of machinery will make the situation clear. A Ford acts as it does, when stimulated with a starter or steering-wheel or accelerator, because it is constructed that way. What it does is a reflection as much of its structure, mechanically, electrically, chemically, as it is of the stimulus it receives. The same is true of an organism, though the structure is infinitely more delicate, more complicated and, as we have seen, more subject to that strange thing we call modification through experience, We can not think of a Ford becoming so modified through being driven, *i.e.* through experience, that it would

respond better and better, more and more cleverly, more and more judiciously, to the incidental stimuli of its environment. But a Ford is not an organism but merely a machine so it has just such limitations. An organism, on the other hand, while it starts out with a structure which leads to the reactions of an unlearned type as we have described them, soon modifies even these very structures and thus produces or exhibits more and more clever, more and more adequately balanced and fit reactions, just because its first structure becomes modified through experience. All conduct, however, whether at the simple level of unlearned acts or the complex level of highly delicate learned acts, is a reflection of structure.

It is now proper to consider, in more detail and with reference to more practical conclusions, the whole matter of inheritance *versus* training, nature *versus* nurture. Is a man what he is because of heredity or because of training? There are two schools in this matter, both, it seems to the practical mind, too intent on proving a technical point. One school speaks as if heredity was of no account and that any child with proper training could become anything that is good and desirable.

The other says just the opposite and claims that even a well-endowed child is so apt to be spoiled by inadequate training that nothing worth-while will result. Our point of view will be at once that of unbiased science and common sense, for science, as should be evident, is merely organized common sense, purged of fancy and emotions and supported by experiment and proof. Let us use an illustration. Suppose we have some first class, excellent seeds of any kind you will. Put them in sandy, dry soil, giving them only that minimum of sun and water on which they will just survive. Will they flourish in spite of these deficiencies? No; they will perhaps grow up, but all the virtues that what we call their heredity implanted in their make-up will have been given no opportunity to actually develop. Their virtues will lie dormant, implicit, undeveloped and there will come a time when no change in the conditions will enable them to recover, to catch up, to develop the potentialities that were theirs at planting in virtue of their ancestry. On the other hand, let us take some thoroughly bad seeds, seeds that have no heredity virtues to speak of, and plant them in the best of soil, give them all the sun and water

that is scientifically proper. Will they become the best of the best? No; they will develop all their potentialities, all their inherited virtues, but they can never rise above the level of their source. In other words, heredity and environment, what things are at birth and what is done to them as they grow, are two separate, coördinate, coöperating things and one cannot and will not take the place of the other or supply deficiencies that are due to the other.

With the best of heredity, a good environment is necessary to stimulate the actual, objective development of the latent, inherited traits and virtues. With the worst of bad heredity the better the environment needs to be to bring out in actual development what little heredity has granted. In a sense, the worse the heredity the better the environment needs to be in order to develop anything at all worth-while. Heredity furnishes the material with which environment works. Environment develops what heredity gives it to work with. Both are necessary for final good results. It would be a foolish question to ask an imaginary spirit child about to be born, "Would you rather have good parents and a poor environment, or the reverse?" The poor child, if the reader

will excuse this impossible supposition, would have no real choice at all; if he were wise he would say, " Give me both or neither."

The old belief, then, that " genius will find its way," which really means that no matter how poor the environment is, a really fine heredity will work out its salvation, is wrong. It is sentimental. It excuses our poor efforts in this world; it excuses the inadequate educational machinery we have. To be sure, if a child is very gifted by heredity, even the poorest of poor environment, provided it does not kill the child off, will offer some stimulus to that richly endowed child. But consider, even vaguely, how much more a rich environment would have given it an opportunity to flourish, develop and mature its rich nature.

But we have used several terms that perhaps need more explanation. What is a good, what a bad environment? This throws us right back to matters we have partially discussed previously. A good environment is one that offers those stimuli which favor the healthful and balanced development of the organism, which is rich in stimuli, which results in health, growth and activity, in which destructive stimuli are at a minimum and constructive at

a maximum. An analogy from the mechanical world will again illustrate the differential activity of heredity and environment. We get an automobile from the manufacturer; no matter what we use as fuel or lubricant, no matter how we try, there are definite limits of good performance beyond which the car simply cannot go: it is literally built to do so and so and it can not do better. It can, however, do less well. If we abuse it, do not give it the proper oil, water, gas, adjustments, it will not fulfil the intentions of the maker, nor the potentialities of its structure and the materials and their relationships. We, too, are constructed definitely. We are built, at birth, to do so and so; much of it the same as others, some of it individual. If we are not properly treated, we will not fulfil the expectation of the structure and materials that went to make us. Of course, unlike the car, we develop and mature, but the illustration does not do violence to this fact which will receive detailed attention as we progress. Unlike the cars of any given manufacturer, we differ among ourselves to a marked degree; we resemble, each family of us, a given type; but each family has slight individualities, and each individual also.

This matter of heredity and environment has at least three very important results. It means that we should see to it, in all ways possible, that individuals should be well born, *i.e.* that all individuals should start off with a fair inheritance, at least, and that the hopeless as regards inheritance should cease to be born. It means, secondly, that we must study even more the effects of education so that there will be no hit and miss in the technique of developing the inheritances that children do bring into this world. It means, thirdly, that the idea of "responsibility" needs careful examination.

We are wont to say that a person is "responsible" for actions done after due deliberation, "deliberately," whatever that means—most people do not analyze out the real meaning. On the other hand, deeds done in the heat of emotion, say when terribly frightened or very angry, are excused somewhat; those done "accidentally," unconsciously, through error, in one's sleep or when drugged, we forgive freely. The courts are full of arguments along this line and it is not at all clear that such distinctions as the words above seem to suggest really exist. The arguments on both sides are full of

such words as " free will," " determinism," and similar phrases. Apart from fancy and tradition, however, and the influences of loose, popular thought, what are the facts? Psychology, remember, seeks to know the facts and to understand human nature as it is, not as it might be if it were something different. One can still love humanity even if it should turn out that many things we have heretofore thought about it were but pious and sincere hopes and misbeliefs.

What we have said about heredity and environment should answer the question. A man, a woman, a child, however old, however intelligent or stupid, whether well or ill, does that which at the moment is the one and only thing that individual can do in virtue of the inherited nature and the modifications which experience and life have added to it. All acts are necessary; all acts are determined; all acts are the exact resultant of the nature and training we have and the stimulus or stimuli which led to the act. Let us go up the scale. We have seen that human nature is such that the eye will blink, due to inherited structure and sensitivity, when a shadow or object juts across the vision. We cough when our throats are

irritated; we sneeze when the inside of the nose is stimulated, and so on, just as we fall when support is removed. Go a bit further. A child learns through wrong experience to fear the dark. It will then, unless new training comes in, fear the dark just as determinedly as it will fall. It is now its nature to fear the dark. If your name is called, you respond. That, too, is a learned act, but respond you will if you hear it. To be sure, the response may not be open and above board, but there will be a response. Still further, you either do or do not like a certain individual in your field of acquaintances. That liking or disliking may be withheld from overt expression, but it, too, will be the result, the outcome, the exact expression of your original inheritance with its possibilites of likes and dislikes and the experiences which have made the particular likes and dislikes characteristic of you.

Look at it another way, for the subject is immensely important and fraught with all sorts of practical consequences. Psychology always leads on to more! If an act is not the result of your character, your abilities, your disabilities, your learning and intelligence, your ignorance and your deficiencies, all taken

together as the sum and substance of YOU, then whose act is it? To be sure we deliberate, hesitate, waver, start to act, withdraw and finally either act or do not act, but all this is another story. The question here is, is that act which an individual performs really that individual's act? The argument can, of course, be carried to metaphysical depths and theological ends, but this little book, I may be permitted to remind my readers, is the story of psychology, not a final and completely detailed text and abstract thesis. Consider, again, the automobile with which we roughly compared human nature a while back. At any given moment, due to its mechanical condition, its previous treatment, its structure, the quality of its parts and material make-up, it can do just so and so and not otherwise when a given stimulus, in the form of a hill, a bump, a turn, a race, is offered it. To be sure, the car is not, as we alas are, conscious; it does not " reason " with itself; it does what it is able, constructed to do and that ends it. We, however, when we consider ourselves, seem to be able at one and the same moment either to do or not to do; we seem free; we seem able to go right or left, but it is just " seem." For, if we are thus able

to do or not do, why then do we educate? The whole problem of education, whether moral or social, is to so modify human beings on the basis of their inherited dispositions and abilities that they will do this and not that, will act thus and not otherwise. Education is an actual system of producing the right kind of determinism, not just in small relatively insignificant acts, but in larger matters of attitude, habit, ideals and so on.

All this means, of course, that we are all equally responsible for all that we do, or if you will, responsible for nothing. Look at it this way: if a car acts up, if it does not go properly, do we blame the car? If we do we are foolish. We had better repair, readjust, recondition it, so that it will act the right way. But when a child does that which is forbidden, it is usual to ask did he do it thus or so, did he do it deliberately or not? On the other hand, it is sense and excellent practice to realize that of course he did what he had to do under the circumstances, being the child he is by nature and earlier experience, but, and this is the really important thing, we must so retrain him, so train him in better ways, that the next time the stimulus comes which once resulted in wrong-

doing, the child will respond properly because, due to the extra training, he is now another child. In other words, the answer to wrong-doing whether in the nursery or in the world at large is twofold: first, such training on the basis of original nature that the wrong response will not happen and second, if the training has not taken hold, so that the wrong response does happen, then the answer is more training and of a better sort.

A bit back we said that human beings, unlike automobiles, are conscious. It would be the joy of psychologists if the word "conscious" and all that is ordinarily thought of in connection with it were dropped from the subject. But it cannot be done and the only other alternative is to try to make this elusive word have some sense. Suppose you study geology, the study of rock formations and the structure of the earth. You measure, you analyze, you think, you come to tentative conclusions. Then you test these, have others consider them, see how your conclusions harmonize with those of other and related sciences, and so you build up an exact and scientific knowledge of the structure of the earth. You do not, however, ask the rocks what they think, what they feel, what they

did and are going to do and why, and when, and where. If rocks could speak, if they could remember and forget, if they could hope, plan, fear, become angry, like and dislike things and people, what a problem the geologists would have! The psychologist has just that problem. It is due to this dilemma and difficulty that the several schools or varieties of opposing camps of psychologists have arisen. This book, it will be remembered, has no propaganda to spread other than the purely general one of making psychology a subject of interest to those who are anxious to begin the study of it. In this book, there is no need to do other than present the sane and sensible modern point of view, omitting the detailed eccentricities and peculiarities of different investigators whose books, incidentally, will be found listed in the descriptive bibliography.

A consideration of consciousness involves the old, old difficulty of what is called self-consciousness or consciousness of self, or introspection. For example, try to list what is taking place in you when you are angry, or in love, or afraid. Let us take a case. Suppose you are angry. Turn your attention inward, list all that is going on, and thus, if

you can, come to an understanding of anger. It just cannot be done. On the other hand, if we place you, as subject, in the laboratory and attach to you the proper and delicate machinery for exact observation, we will find that when you are angry, your blood-pressure changes, your heart beats differently as well as with different tempo, your breathing is altered, and still more hard to detect, some of the ductless glands begin to pour into the blood their secretions, so that our blood would coagulate more rapidly, and we would have more immediate energy at our disposal were we to fight. Consciousness or introspection would tell you none of this; only the laboratory and scientific instruments would do it. Yet, if we take a small quanity of blood from an angry cat and inject it into the veins of a peacefully sleeping cat, the second cat "gets angry" even though there was no outside stimulus, such as a dog, to make her so.

We are not discussing, here, that general "awareness" which is a fairly constant factor in our whole life of experience. We are rather concerned with the awareness of that awareness. Thus, the reader is, in some sense, aware of the words he is reading; he is conscious of

them. With consciousness of this kind we will not quarrel; but if I ask you how you are aware, to describe the details of the functioning of that awareness, its inner nature and so on, you will be at a loss. You can be, and normally are, aware of many things, particularly of the objective facts of the environment, the superficial changes of your organism. But there are also many changes of which you are not aware and of which, in no sense, you can become aware of directly by consulting consciousness. One needs, in these matters, to go a very roundabout way, use apparatus, make experiments and so on.

It is for reasons of this kind, namely, the difficulty and the confusion attending introspection and self-communing, which have led to the establishment of the modern programme of what is called "behaviorism." This is a type of psychology which has much in the main to recommend it but which, as is so often the case, in the effort to avoid some obvious difficulties, plunges enthusiastically into others almost as bad. Introspection, without question, has its values, particularly when checked up by other methods. Thus, suppose you question a person who says he is being secretly

poisoned, who has, so he says, great and powerful enemies, but equally great and powerful friends and relatives. He confides in you, secretly, that he is really the Emperor of Germany, and offers to share his fortune with you if you will aid him. Now there are no instruments at present existing which would gather this tale from the man unless he spoke his belief. There are no instruments which will show why he thinks this, or when it started, for the diseased condition in which he is, might just as well, had the circumstances of his life been different, have resulted in his thinking he was the Sultan of Turkey or the President of the United States. He is perhaps to be called insane in a definite sense, but we cannot and will not know what his illusions and false ideas are unless he tells them to us. Again, I cannot know what you dream unless you tell me. That you do dream, I can gather, but when, and why and with what further results, you will have to tell me in the main.

Thus, modern psychologists need not quarrel, as often they do, concerning the relative merits of two methods of obtaining knowledge of human nature, but use both, checking the one against the other, supplementing one with

the other. Psychologists, however, it must not be forgotten, are also human beings prone, as we all are, to ride hobbies, sometimes too strenuously. It is for that reason that modern psychology, at last, is coming to be a coöperative affair, where the several psychologists investigating a definite problem each check the other and nullify, through the presence of many personalities, the idiosyncrasies of each individual. It has been this way with the other sciences for many generations, and is partly the cause of their success. Any science is greater than any scientist, and human nature, incidentally, is not yet subject to a final classification and analysis. There is more to be learned than has been learned, and to go further we need not only more and deeper investigation, but greater freedom of investigation which freedom, incidentally, can only come when the general public is aware of the importance, the pressing need for it and will, through understanding the psychological point of view, help carry it on. Knowledge, of whatever it is, in the long run is for all of us, not just for the scientist in his private laboratory.

All through the preceding pages we have used a word, " thinking." We have spoken of

thought as contrasted with emotion; we have mentioned judging, hesitating, planning, studying and the like. What is this mysterious thing we call thinking? It is a subject on which much work has been done; on the whole, satisfactory work. Thinking can easily be a hindrance as well as a help. Consider, for example, the inexperienced public speaker, the new chairman of some sub-committee, going on the platform for the first time to deliver the conclusions that seemed so easy, in committee, to express. He begins to think—to think about wrong things, wrongly. It is not merely thinking, of course, when thoughts of appearance, voice, mannerisms, walking, standing, language, begin to be considered. How will I look? Is my dress all right? Will they like the way I talk? Will I stand thus or so? No, it is not just thinking for, as we have said before, the organism never does such simple things as just feel, just have emotion, just think. It always has a complex, a combination, of all these. None the less, the thoughts are there in the instance we have chosen, and we all know from experience that to think and to have at the same time emotions concerning things which, under other circumstances, are

automatic, is disastrous. Again, we all could walk a plank, six inches wide, laid on the floor, but if it spanned a deep chasm, or if we knew that failure to walk it meant disaster, we would again be betrayed by the way we thought and felt.

There is another way of saying this—just backwards. The scientist, supposed to be cold, logical, almost inhuman in his pursuit of truth is, as a matter of fact, just as emotional as the proverbial flapper who spills her emotions all around on everything and nothing. Likewise, we all think; but what we think about and under what conditions we think, and with what complication of emotions we think, is the question. Thinking is simply the representation to ourselves of actual or possible conditions, past, present, or future, in words of one kind or another. For example, suppose you are asked whether you would prefer to take your vacation in the usual period of two weeks, doing as you please, going where you would, or to have three or four weeks but to go to some designated place and do a little bit of business on the side during that vacation. Certain alternatives of money matters are also involved, and perhaps there is a suspicion that

your decision may directly or indirectly involve your future with your firm. On the other hand, you are run down, you need a rest, you had planned to join friends and so on. Now this is a fair example of a concrete problem of such nature as we all have to solve every once in a while. It is not all-important, but it is not trivial. How do we go about it?

In a simpler situation, such as which hat of two will we buy, each costing the same, we can just try on one, then the other, then the first, then the second again, and by this process of direct experience come to a solution on the basis of direct sensation in the light of previous experience and all that plus, possibly, friends at our elbow. We cannot, however, deal thus directly with the other problem. The hat can be decided on without a word. We could talk about it, of course, if we wanted to. But the vacation problem needs language to solve it. We cannot first do the one alternative, then do the other, and so on. We cannot eliminate the doing of the one in order to do the other. Such problems we do solve though, be it strictly noted, not necessarily correctly, for thought does not guarantee results in any sense, alas!

Well, we talk about the matter. Maybe we talk in written language, putting down the advantages and disadvantages of each alternative in parallel columns. Maybe we talk it out with some willing friend, striding about the room the while. Maybe, if we have no such passive or semi-passive auditor for our troubles, we talk it out to ourselves, being both questioner and listener and answerer, at the time that we are thinking. We are constantly and necessarily using words even though we do not pronounce them right out audibly to the ears of self or others.

These words are symbols, signs, substitutes for handling the real thing which, as we have seen, we cannot do directly. With the hat we could have said, "This one is too dark. Yes, but this light one is too large. Well, on the whole, since the weather is bad, I'll take the dark one which fits." Now, every word of that oration was a substitute for experience or sensation. When we said, "the dark one fits," the particular noises which constituted those words were merely signs, symbols, of the actual sensations, plus memories, of a hat that was not too large or too small. Your previous experience has taught you this; you have

associated with the word " fit " certain experiences, and when that word strikes your ear those experiences are stimulated, remembered, recalled, come into the field of consciousness. Thus, again, I say, " I have a cat at home." You understand me simply and solely because you have had experiences with cats and have had experiences with homes, and all the other words are noises which you understand because of other previous experience. I could say the same thing to you in Russian, but unless you had had training in that language, you would not understand, that is, the appropriate memories would not function because there wouldn't be any to function!

Words then, become, through experience, associated with things. Words are a sort of shorthand, oral or written sign for things. They can be words in any language, your own private secret language, if you will, but then they would not have social use. They can be in printed form, alphabetic, pictorial, conventional, anything you like. Gestures of the hands, of the features, of the foot, of the whole body are also, in this sense, signs of things and conditions. We can thus express our thoughts in any of those ways in which we have

been trained, so long as others have had the same training. What we call a cat could be called a dog and *vice versa* without altering the real nature of either of them, nor of the nature of language. It is not that a word has any magical nature or that it contains in itself any of the real nature of the object it names, but simply that convention and usage from childhood up associates the thing with the printed or spoken word or whatever other substitute is used.

To return to our problem of the vacation. We can, as the circumstances have been given, only solve the problem by using words, or else give up solving it in any sensible sense and toss a coin or get someone else to decide. So we talk about it, use words, call up memories, weigh advantages, take this and that and the other into consideration, ask this person and that, come to a tentative conclusion, reject it, do it all over again, and finally perhaps, but not necessarily, come to a definite decision. Why all this fuss? Simply because the stimulus, namely the offer of alternatives, which was thrown at us was complex. We have seen that some stimuli have their responses written in the native structure of the child. Some others

have a tentative answer which can be modified to suit varying conditions. By nature and inheritance we have no answer to such complicated things as the problem we are discussing. We have to defer the answer, and thinking, in one sense of the word, is a deferred answer to a situation. We never think unless there is a problem. The situations which nature and habit can answer we do not think about. Only when we meet with a situation for which there is no ready-made answer do we indulge in this play of words which is thinking.

Thinking, then, is perfectly natural. We all do it, though the things we think about are dependent on the problems we meet, the previous experiences we have had and the general needs and desires of the organism. There is no guarantee, as we have said, that the final solution, the final settling of the problem will be right, good, or best. When all the thinking is finally done, when the last word has been said, we can then only test it out by trying out in overt and actual act what we have represented to ourselves as worth the doing in the substitute activity of words. And we often find it will not work, that we have neglected some facts, forgotten some elements, over-

looked some conditions, ignored some part of the whole situation. So we go back and think some more, unless we give it up as a bad job, which is not infrequent!

It should be quite evident, then, that we can really think even approximately correctly, only with reference to those things which have been a part of our experience. I cannot, for example, in any sensible sense, think what it would be like to be on Mars. Only by analogy and that is usually misleading, could I come to any conclusion. There are also other difficulties in the way. I cannot think what I would be like and what I would do if I were someone else and not myself. To be sure, I can, by words, represent my friend's problems to myself, recall what I know of his experiences, plan as I think he would plan, but that is not being he at first hand.

All thinking, then, is to solve a problem for which we have no ready-made answer either as a result of nature or of nurture. And, to go back to a point raised previously, we never just think. Our thoughts are colored by our emotions. In still other words, the needs we have as organisms, plus those we have acquired as experienced cultured human beings,

dictate the ways, the directions, the problems of thinking—set the goal. Thinking, the ability to thus defer a response, the ability to summon past experience to solve a present need, is a tool, a tool developed by the process of evolution through which our ancestors immediate and remote painfully went. When I say that thinking is a tool, I imply a great deal. It means that thought is secondary, not primary; it means that we think in order to live, survive, get what we need, and do not, most emphatically, live in order to think. Were life smooth, were all our problems soluble in terms of habits early acquired plus the outfit of original nature, we would never think. To think always implies an obstacle. Thinking, as a tool, is in the service of and for the sake of the other aspects of human nature. Thinking is in order to live, to satisfy organic needs as well as those needs which, on the basis of experience and training, have resulted in the modification of the earlier original needs. The baby cries for food; it cannot yet think. As we grow older we still need food, and if it is hard to get, we can think, plan, and devise means to get it. If we are peculiarly trained, we can think of how to get a certain type of food which

is rare and hard to get. Still our thinking is in the service of that elemental need, the need for food, though we have embroidered and modified it in its apparent nature.

We may express this point thus: there are drives and mechanisms, *i.e.* fundamental basic needs, and means of accomplishing, attaining, consummating them. The drives are the needs and hungers, whether for food, sex, mere companionship, shelter, safety or the more sophisticated ones that we acquire as we go along in life and become conditioned and educated. The drive for food may become a drive for quail, unless the need for food becomes too insistent after too long a period of abstinence, when we will again crave any food if only it be food. One of the mechanisms is thinking, the latest evolved in the procession of life in its various forms, the most complicated, the most human. It is a mechanism just the same, not itself a drive at all. It is in the service of the humbler needs and hungers, however complicated and conditioned these may have become and however they may have been overlaid with details and fancies and individual peculiarities. The fundamental problem, concerning which we do not and even cannot reason (though we

may pseudo-wisely philosophize about it) is to stay alive, safe, fed, sheltered and to produce our kind. All else are secondary, subsidiary means to that end. And thinking is, perhaps of all the tools developed, the most subtle, delicate, and satisfactory, for all that it can so often go wrong and defeat the very purpose for the solution of which it was developed in the race and the individual.

It is just because different individuals differ as regards the relative strength of the various hungers and needs, as well as the degree to which, in each of us, they have been conditioned and overlaid with education and personal experience, that we differ so much in our thinking. Since we think to bring about satisfaction of needs, we will think in the direction those needs point. We so often set out with the conclusions of thinking already consciously or unconsciously set for us, because of our own nature or the influence of society and the training we have had. One cannot accuse a man of inability to think because he arrives at different conclusions from those we reach. We may also be wrong, though in a different direction from his error. What then can we do? That is partly the concern of normal psychol-

ogy and partly that of abnormal. Here we may say this: that a man may come to so understand his limitations, his biases, his hopes and fears, his hungers and needs, that he will be able to discount, in advance, their improper influence on his thinking, and thus enable himself to arrive at conclusions that are in accord with fact.

An example will help. In the days when men, scientists and others, were wont to believe literally the bald statements of the Old Testament, they could not come to sober, scientific, unbiased conclusions concerning the earth, the sun, and the stars. Their thinking on these subjects was prejudiced, consciously or unconsciously or both, by their allegiance to certain statements in that record which said, definitely, that the earth was flat and that the sun and stars revolved about it. This preconception of the nature of the universe they had not, themselves, thought out. It was a relic of an earlier way of thinking, arrived at by an older people who did not have the same ways of obtaining evidence and making observations and measurements. It seemed to satisfy needs, to make life safe. Once, however, it was realized that what lay in the way

of a better understanding of the earth and the sun and the stars were the preconceptions which had not been arrived at by way of personal thinking, people were, to that degree, freed from the domination of the old way of believing and were, to that extent, free to think clearly, scientifically, about such things. The physical sciences, on the whole, have achieved complete independence of thought on all such matters and it is because of this as much as because of anything else that they have advanced so far and become so important a factor in our current life.

In matters not pertaining to the exterior world of nature, in human affairs particularly, the old way of thinking, handed down from earlier ages and less informed peoples, still tends to dominate us, so that we start out to think with the conclusions already more or less dictated by what we want to believe, what we have believed, what we have been trained to ignore, what we think is safe, what we believe will help us live. We start thinking about human beings already determined in our minds that they cannot be this and they must be that. We do not even consciously realize this. As a result of modern psychological

investigations, the machinery of all this has been laid bare and it is now possible to free the mind, in advance of thinking, of biases and preconceptions, so that the present limits to clear thinking are simply the limits of opportunity and intellectual ability. There is so much to know, so much to think about that no one of us can ever make even a fair beginning on mastering it all; we can, however, really master what we do study and think about, and the first step in this is a pre-analysis of obstacles in the path of real understanding. Technically, this is psychoanalysis, a much misunderstood subject. We will be treating of it in another section.

This is, in a word, the main difficulty with the public understanding of psychology, namely, that what it says is so contrary to unexamined beliefs of people in general that it is rejected without critical or sober examination of any kind. It affronts the habitual, the traditional, the usual, the accepted and customary and the safe, and is rejected before a hearing. That this is natural, even inevitable, is clear and the answer is equally clear, namely, an insistent preaching of the new psychology till such time as the mind of the Man in the

Street is able to begin anew and to see more clearly both the problems of human nature and the obstacles to their solution which he himself has set up. The problem of teaching psychology is itself a psychological problem, but the main thing is to bring about, gradually and in ever widening circles, the new point of view. The details will take care of themselves. It has been wisely said that what the average unprofessional thinker believes is two hundred years behind what the experts believe. Modern times and modern methods have lessened this gap between bygone dogma and modern science, but there is still a gap. In a sense, we need to become less self-conscious in order, finally, to become more so and in a truer way.

Our discussion of thinking, preceded by that on sensation and emotions and original nature does not exhaust all there is to say about general normal psychology, the basis of all applications and uses of the subject. Remembering that the organism is a unity and always acts as such, it is still possible to say that these things are the most important. They are the central factors in a more complex whole. Some other things, however, must be briefly considered; in particular, habit and

memory, because both are of tremendous importance in the practical and applied field.

Habit, I was told by my copy book when I was young, is like a cable; every day we weave a thread and soon we cannot break it. Good so far as it goes, but like most copy book maxims it leaves out all sorts of qualifications. Habit is good, nothing better; habit is bad, nothing worse. We constantly form habits and are loth to break them. Habit is so smooth; it takes so little effort; it so calmly ignores problems; it dodges thinking so cleverly; it is so speedy and efficient. But it is also disastrous.

What is habit? We have seen that there are, somewhat figuratively speaking, inherited habits, namely, the reflexes and other aspects of original nature. On the other hand, these original tendencies become modified; on top of them and alongside them changes, alterations, additions, subtractions and all sorts of reshapings take place as we learn and mature and become experienced. Thus, the bird that by nature tended to build a nest as best she could with what was offered, and where it was possible, after having done it a given way, other things being equal, tends to do it that way

again. Once an act is performed a given way, the same stimulus, or even a merely similar stimulus tends to result in the same act. This is a habit. It is based on the fact that an entering stimulus, going through the ramifications of the nervous system, finds it easier, for many reasons, to go in and out the same way another time. The formation of habit is merely another name for learning; when we learn we form habits that did not exist before; when we form habits we are learning. This applies to good learning and bad. We can form habits that tend to health and happiness or the reverse, but the same process and the same mechanisms are involved.

Habits are of all sorts, relatively speaking of course, for all habits are really habits of the whole organism. But for the purpose of discussion we can say that some habits are predominately mental, some predominately physical, some emotional and so on. Thus, the way we walk, the carriage of the body called posture, are physical habits. Our voice mannerisms and facial expressions are the same in the main, while our ways of thinking, though based on the physical factors of experience and sensation, may properly be called from a

practical point of view, mental. Our habitual likes and dislikes are emotional fixations, and our habitual moods and general larger tendencies of reaction are literally personality habits. All such habits can be good; all can be bad. It must always be remembered that the main purpose, blind if you will, of the organism is to stay alive, avoid injury, get food and shelter and raise successors and all else, even so-called spiritual matters are but means to that all-important end which is not rational at all but instinctive, biological. Habits can defeat this purpose; habits can also bring it gloriously to pass and aid the so-called spiritual as well.

Habits indicate previous problems now solved, though whether correctly or not may be a question. Thus, it was once more or less of a problem to each of us to tie a knot of the right sort in our shoe strings; it was once even a problem to walk. It was certainly a problem once upon a time for every athlete to master the intricacies of his special field of endeavor. The learning of a new language is at first a problem, as is singing, tight-rope walking and public speaking. In so far as all these become, through repetition and satis-

factory returns, habits, they cease to be problems till such time as new factors enter in and disturb the equilibrium. This is the trouble with habits very often. They were adequate and served the purposes of the organism at a certain stage of the game of living, served to reduce friction and effort, served to make life smooth and free for thought of other things once upon a time, but later they become outgrown and may even become hindrances.

We all tend to become too habitual in some directions at least. We often cannot adopt new points of view because the habits of an old point of view interfere. Habit can become almost a disease. The too-conservative, religiously inclined show the ruling effects of habits formed long, long ago in youth. The timid, the ultra-backward in expression, as well as the too-forward and pushing again show the activity of habits formed early in life. It would sometimes seem as if it would be good to form no habits early in life, to wait until we get older, but then we wouldn't get older except in years. The real solution, of course, is to constantly revise habits, reconsider their worthiness and efficiency, to form the habit, in other words, of reforming habits!

This can be done along the line suggested when considering thinking, namely, of constantly analyzing out presuppositions and our positions in life—not morbidly, but sensibly.

It should be clear that when we talk about habit, we are also talking about memory. We have habits because we remember. We remember because we have habits. In a sense, habit is the outward performance of that which is based on inner memory. And memory, like habit, may be good and it may be bad. Habits may be consciously observed in their doing, or unconsciously performed, quite automatically. So, too, we may realize that we are remembering, or just remember without that additional consciousness of the fact. These days are full of so-called memory courses. The old Greeks were interested, as one of them said, in how to forget, for just as some habits should be broken, so some memories are only a nuisance and had best be put into the discard. Here, as indeed everywhere in the story of what we call normal psychology, the threads begin to weave themselves into the field of the abnormal, for as Freud says, the nervous and the neurotic suffer from bad memories. We will, however, come to that in good time.

All habits are based on memory, in the sense of the word which means an actual change made in neural paths by actual experience. Those experiences which were satisfying to the organism, which advanced its business, which were frequent, tend all the more to make the path of their entrance from sense organ and stimulus and their coördination in the association centres, and their exit through further neural paths to muscles and glands, an habitual path. All this we have seen from another point of view. But it is readily seen that memory is a very much blurred word in its meaning. Indeed, it has really at least three meanings: first, memory may be thought of as the actual trace, path, modification, neural pattern or rearrangement of inherited structure; second, it may be thought of as the present operation of that structure; third, it may be thought of as conscious present awareness of the operation of that same structure. Let us illustrate. There is, in your nervous system, a trace, a pattern, a modification of your original structure corresponding to a certain fact which I am about to name. You learned the fact, through repetition. It was not born with you. You know the fact because your biological

structure has been, like a phonograph disk, marked with the neural trace which corresponds to the physical marking on the disk. This trace or pattern is memory in the fundamental, basic sense of the word. It is the physical basis for any other aspect of memory. It can be destroyed but, on the whole, it seldom is apart from disease or accident. To come back to the fact which we said was thus a part of your neural memory patterns, let me ask a question. Who discovered America and when? There, you have the fact! All but a few people in this country will answer, "Columbus, in 1492." That is, there was that particular modification of the nervous system, based on previous experience and sensations, *i.e.* words, sounds, pictures, and so on. The modification was there; the question, as a stimulus, set it going, behaving, functioning. This is memory in the second sense, *i.e.* recall or reactivity, the using, the acting of the neural path and pattern previously built up. There is a third sense: you remembered, you recalled and then you recognized. It could be that you might have the right trace, could actually make it function, but for one reason or another (usually somewhat abnormal) you would not

recognize the memory even though it went off. Thus, try to recall the name of your nurse, if you had one when you were three years old. Suppose you cannot. It is certain that there is a trace, a pattern connected with it, but it has been so long disused, or so connected with other matters not our immediate concern, that you may not be able to recognize the name even though you name over all the names you know and some one tells you that you had actually named the right one.

But, it may well be asked, how are habits and memory traces formed? Are there any generalizations, any so-called laws, based on scientific observation and experimentation, concerning habit and memory traces, or broadly speaking, learning in general? Yes, there are such laws, and their statement exemplifies the spirit of the modern, objective, scientific study of human nature just as the laws of the physical sciences show the results of a non-mystical study of the so-called inanimate environment. Suppose, for example, we wish to study how a cat gets out of a basket which has a simple latch to be reached by putting a paw in just the right place and pushing just so. In short, we wish to study how a cat forms a

habit, makes memory traces; in a word, learns. We cannot, luckily, in the case of a cat, talk to it and confuse the issue by all sorts of dictatorial advice and words, words, words. Nor can the cat's friends or relatives give it advice. The cat is fool-proof.

So we just place the cat in the basket, latch it, and watch what happens. We can, if we wish, in order to hasten matters, place a bit of fish outside the basket, near by. If the cat is not hungry, and finds the basket comfortable, it may just go to sleep, or sit and purr. But if it is hungry, or when it gets so, or when the desire for exercise, roaming or what-not is felt, or if the confinement becomes unpleasant, the cat will do something about it; just that—something. It will not, most decidedly, just sit and cogitate; it will do what its organism, because of its needs and conditions, at the moment and under the circumstances, leads it to do. It will arch its back, scratch, paw, push, roll over, bite, snarl, whine, and fuss. This is the law of readiness; the cat will do what, biologically speaking, it is ready, set to do at the moment and under the circumstances. This may, if you wish, be called blind trial and error, but it results in the cat exhausting all

its potentialities of action, all its ready-to-go-off acts, in its effort to achieve its need for food and its desire to get out of an unpleasant situation. It is the story of drive and mechanism again!

Some one of these random movements, if the task is not too hard, and the cat does not become fatigued and go to sleep again, results in touching the latch and getting out. The cat does not then sit down and reflect on life or congratulate itself on success. It eats the fish. This exemplifies the second law of learning, namely, satisfaction. Now, after a suitable interval, put the cat back in the same basket. It will, if ready, again go through much the same antics, the same monkeying, which resulted, previously, in getting out, but with this difference: the particular action which previously resulted in getting out and having fish will tend to happen sooner. This, when repeated, results in the third aspect of learning, namely, the law of exercise or repetition. To be sure, in proportion as any cat has had experience in getting out of many similar baskets, it becomes skilled or learned in a general sense toward such baskets, but always and every-

where, the cat learns in terms of readiness, exercise and effect.

The same applies to humans, though the process, superficially, is colored and complicated by language and what we call thinking which, as we have seen, is but an additional tool and nothing supernatural or mystical. All the habits we have, all that we remember in either a muscular or a language sense, is due to a once-upon-a-time readiness or biological condition or drive plus resultant satisfaction after effort to change the situation, plus exercise or repetition of the act and the satisfaction. The practical and concrete conclusion from all this should be evident. In the past, learning has traditionally stressed the aspect of repetition. We should stress more the native readiness, striking on that moment when the organism is set and eager for the learning of a given act, and attaching to its doing a proper satisfaction or reward, then adding repetition. For what is done when we are ready to do it, and what, when done, has resulted in satisfaction, brings about quicker learning, more permanent learning. But, and this is the important result, all learning, however much against the grain, and of whatever nature, be

it singing, swimming or solving calculus problems, must and does go in accord with the laws we have enunciated, though sometimes the technique of using them is so poor that they almost seem absent.

So, to summarize, memory is first an actual biological modification, second, the present functioning of that trace on presentation of the proper stimulus, third, the recognition of it as what it is. Needless to say, this so-called recognition may be very dogmatic and yet quite wrong. We are often sure we remember rightly, yet facts prove us incorrect. Indeed, it is proper here to say what we said of thinking; there is nothing guaranteed; we can only test memory as we test the conclusions of thought, by final appeal to the world of reality and fact, through the all-important sense organs. It should be clear that sensation is of use always and everywhere, yet it too has its weak spots, and what we call illusions, and even hallucinations are not infrequent.

Thus, to illustrate. We see a ghost! Investigations prove, unless we are very indifferent to facts and real conditions, that it was merely a combination of shadows, clothes, a tree and a post. That is, there was a real sen-

sation, but we interpreted it incorrectly; we perceived it wrongly; we added too much to what the sense organs gave us. This was due to a very interesting and important fact, namely, that other things being equal, we were ready to see a ghost. We had, perhaps, been talking, reading about a ghost. Perhaps we really believe in them, hope there are such things, frequently dwell thoughtfully on the matter. Our mind-set is, as it were, ready to receive such actors. For as should be quite apparent, the organism is not merely passive; its dynamic reactions with the world are as important and as strong as its passive reactions. All experience is giving as well as taking. All life acts as much as it is acted upon. All experience, as we said earlier, is a product of what the organism, at the moment and by virtue of previous experience is, as well as what the situation, the world, the simple or compound stimulus is at the moment of its activity.

An illusion, then, is a mis-interpretation of experience and sensation. It happens because certain memories, certain habits of thought and emotion are too ready to go off, some particular drives are too insistent, and the more critical

habits are too dormant. An hallucination, on the other hand, is entirely or almost entirely subjective with little or no sensational basis. Thus Macbeth, in the dagger scene, sees a dagger before him, where nothing is. His inner thoughts, his inner feelings and emotions are so emphatic, so strong, so flowing that they project themselves and the individual acts as if there were something there where there really is nothing at all. The hallucinations of the drunken and the drugged are similar. So little is there in the way of objective actual sensation relative to what seems to be there, that it amounts to a practical zero.

To come back again to memory in the ordinary sense of the term, what about training the memory, a phrase current these days and a subject of great interest to most of us whether in business or professional life? It is correct, though at first sight disappointing, to have to say that the memory cannot be trained in the sense of the word that such current wishes or plans mean the word train. In short, apart from a few points to be mentioned in a moment, the best way to train the memory is to sleep well, eat the proper food in proper amounts, get the right air, exercise and relax-

ation, don't worry, and the memory will be at its best. One could and should add that emotional excitement of any and all kinds is probably not conducive to good memory. When we wildly strive to remember, become angry because we do not remember, then turn fearful lest we continue to fail to remember, we are probably doing the best thing to continue not to remember what we are after! To relax, to become almost indifferent, is the best answer to that situation and then, very frequently, and almost impishly, the desired fact that eluded the search will suddenly, seemingly of its own accord, come to mind. One other help: the way in which we learn, other things being equal, will affect the way what we learn, functions later, *i.e.* the ease with which it may be recalled. Studying is a world by itself and we may here say merely that learning, like remembering, is best accomplished without emotional activity. Interest we should have, but the hot, eager, restless learner is apt to be the fragmentary rememberer. Again, when we learn, we should associate, we should endeavor to summarize in our own words, connect with things we already know, recall illustrative incidents in our own experience; in a word, have

a running and parallel stream of thought with that new thought or collection of thoughts which we are learning or endeavoring to make our own.

Memory systems, from the point of view of scientific psychology, are more or less roundabout and dramatic ways of doing what we have said above can be done quietly. To associate a new fact with an old one that is really already a part of our experience is better than to associate it with some fact in the memory system which is itself as susceptible to being forgotten as the fact we try to associate with it in order to remember it. It is as easy to forget two facts each associated with each other as to forget one. The best association is with that which is already a part of our usable memory. But the memory systems do actually help people in the sense that they make people pay more attention to what they are trying to do and through suggestion, to which we are all, professional and laymen, extremely susceptible.

My readers will have been wondering for some time what there is to the frequently mentioned images and the whole matter of imagination. As usual, the prevalent, unprofessional

public point of view needs much qualification and correction. Images there are, but they are actually a faint and ghostlike matter when compared with the popular conception of their nature, importance and value. Let us illustrate. Form what you call an image of some important public monument or statue you have seen and still see very frequently. What is your experience when you are conscious of this so-called image? I am asking you, as is quite evident, to introspect, a thing we said in the beginning is most difficult and involves all sorts of errors that cannot be checked up. This attempt at introspection should do two things: convince you of the difficulties of the undertaking and also show the elusiveness and shadowy nature of images. Is the image as clear as the original? Is it subject to careful examination? Can you not do all sorts of weird things to it—turn it upside down, make it larger, smaller, any color, animated, ruined, add this or that detail, or subtract them? Is it sharp, definite, real? Some people will answer a definite and dogmatic "yes" to all this; some few will be, more wisely, somewhat dubious. If we then question those who are sure their image is all that the

original is, or nearly so, asking for definite facts, we will find them in error. They will be able to tell some facts about the monument of course, but those facts will be facts which have been noted in actual experience, reduced to words, remembered in that form, and not at all due to their ability to get information of fact from the image itself. The more they have noted, put in word form, and thus remembered about the actual monument, the more the image will seem to give them. In no case will the image give facts or details which have not thus been remembered as stated.

Incidentally, if the reader will recall our discussion of illusions and hallucinations, he will have the basis for another and interesting and very modern interpretation of images. Recent investigations and experimentation have given some basis for the belief that random stimuli, misinterpreted, give us the foundation of what we call images, some of these stimuli being light seen through the closed eyes, in the case of visual images, some being actual conditions of the eye itself as an organism. Random sounds can be made to form the basis of an auditory image in the same way, thus again making images, in part at least, re-

semble illusions. But, in any event, the matter is not, as we shall see, important.

We will not deny, then, as some of the more radical behaviorists do, that there are images. We do, however, deny that they are, first, accurate, second, that they serve any useful purpose, and we would assert that they actually are a detriment to clear thinking, careful reading and a well-functioning memory. Take the case of reading for example. Suppose we are reading poetry, or a fairy tale, something with a lot of descriptive passages. Does one actually need to image such things? Must one, when he meets the sentence, " The black cat chased the white dog in ever narrowing circles," need to see inner, vague pictures of the cat, the dog, the chasing, the narrowing circles? Most certainly not, though many people will assert that they feel themselves forced to so picture the sentence in order to understand it. This latter statement is full of logical as well as psychological errors, which we need not analyze. There is no real need, however, for any such imaging in order to understand, for I have not imaged the situation yet, though I have written it and discussed it. On the other hand, if we do so image, we necessarily limit ourselves to a particular cat,

dog, and situation. Imaging thus destroys the generality of a statement and leads to false memory since the particular facts put into the image by the reader may be the facts remembered and not those of the actual statement. Still further, such imaging slows up the whole process of reading and thus makes still further for inaccuracy and poor retention. Finally, the habit of endeavoring to image is responsible, in part, for the inability of many people to read what are called abstract books, *i.e.* books which deal with things and relations which cannot in any adequate sense be even dimly imaged. Of course, if we are reading simply for relaxation and pleasure, then we may image for the fun of it.

Thus far, then, we have presented without, of course, the detail necessary for a more professional platform, the essentials of modern, normal, everyday psychology, showing nature and nurture and their interaction in the give and take of everyday life. We are not as complex as some thinkers would make us, nor yet as simple as others would have it. The main thing, as has been emphasized all along, is to get a point of view which sees man as one of the organisms here in our earthly environment, which studies him without biased

pride or prejudice, which seeks to understand him in terms of the facts, using fancies, if at all, merely as a stimulus for exact investigation, and which has constantly in mind as a result of understanding a better adjustment, a happier, better-balanced, saner, more productive, creative life for each and all of us, a life in which we will all come to develop and live out our capacities and abilities.

But we are not all the same. Individual differences exist, though in the main they are emphasized too much. The concept of normal has a wide application. We can be very individualistic, yet normal, provided we do not step over that line of social adjustment and mutual understanding which each society and each age, somewhat dogmatically and uncritically, sets for us. When we become, by those elusive standards and judgments, too individualistic we, *ipso facto,* become abnormal. This is to say no more than that the individual has departed too far from the herd to be accepted as an example of that herd. For to be abnormal does not necessarily mean to be degenerate, nor criminal, nor undesirable in a conventional sense.

IV

THE FIELD OF THE ABNORMAL

That much misused word, abnormal, means simply not normal, away from normal. As such, used exactly, it does not mean sub-normal or inferior. The correct understanding of the word needs either of the two further qualifications, sub or super. Thus, all the great men and women of history were and are abnormal for it is quite evident they were not normal, average, or usual. Still further, it is not only possible, but probable, that an individual who is abnormal is so merely in some particulars and not in all. Still further, it is possible to be sub-normal in some respects and above the normal or supernormal in others, and remain normal or about average in still others. Thus, one can be sub-normal in height, weight, and brains, yet supernormal in some special talent. Many of the so-called idiot-savants, or adults or children with a special ability to do prodigious arithmetical problems instantaneously in their heads, are sub-normal in

many other respects and quite normal in still others.

It is usual, in treating of the abnormal, to consider the general field of intelligence, *i.e.* thinking ability, as one main division, and to then treat of the so-called nervous and emotional abnormalities of personality and temperament, as a second great division. We will follow that procedure, for it is commonly easier to be objective in considering intelligence and thus to lay a better foundation for understanding the really strange antics of the abnormal in other respects.

When we talk about normal and abnormal, we imply that there is a standard, something which we have measured and found to be the most common, the average. In matters of height, weight, eye-color, age of death, right-handedness and a host of such other quite objective factors it is easy to see how by actual instruments or concrete counting we can arrive at the facts and strike an average. In the matter of intelligence, however, how can we know the facts or measure and strike an average? Intelligence is not something we can measure on a yardstick or weigh on a Fairbanks scale. Still more, we know that while

the yardstick we use to-day is, in any but a microscopic sense the same size as that of yesterday and last year and a hundred years ago, how can we know that our measurements of the intelligence of the people of to-day (assuming we can get them at least) are to be compared with those we did not take a century ago and that we may take a decade or a century hence? Of course, it has to be by indirect methods, and all sorts of acute reasoning is involved, but the final results are indeed one of the triumphs of modern psychology even though you want to make all sorts of qualifications in the end.

The measurement of intelligence is based on what is, at bottom, a behavioristic attitude, namely, that what a thing does shows, to that extent, what it is. That is, again using a comparison with automobiles, the fastest car is the one that actually goes fastest. We can give all sorts of alibis for our bad judgment in betting on cars and horses, but the horse or the car that wins went the fastest. To be sure, had one of the others gone faster, had it not had engine trouble, had it not had this, that or the other difficulty, it might have won. In actual performance, however, it did not, and

that is an indisputable fact. Maybe, next time, maybe some time ago, but not this time.

So, when we set out to measure intelligence, or the efficiency of that mechanism we have called thinking, and which we believe on the best of good evidence to be due to the actual biological neural structure and the state of health of the organism, we really measure what that intelligence can do. We cannot measure it directly, as we can size or weight. The intelligent individual is the one who acts that way, whose conduct bears the earmarks of that trait. What are the marks of intelligence? Definitions, as we have insisted, are hazardous, but by intelligence we mean the ability to solve present problems in terms of past experience plus the facts now offered. It means that an organism uses its past experience; that it has, each year, learned more and more and that this more which it has learned is not just static tracings on a placid nervous system, but that such learning has given it new insight, new approaches, new ability in analyzing, new understanding and new power to solve the problems in question. Naturally, we all differ as regards the ways in which we show what intelligence we have. We differ, that is, as

regards past learning and therefore as regards present powers of solving problems. Few of us could show much intelligence in deciphering a Sanscrit manuscript, for we have had little experience in that direction. Some of us do well with motor-car problems, some with dressmaking problems, some with mathematics, some with languages, and it is sad but true to say that often intelligent people in other fields than those they have studied well, often show considerable stupidity.

Let us look at this in still another way. When we are born we are completely ignorant in any intellectual sense; we have had no experience to speak of (for the prenatal period is still a dubious matter) and we have not yet learned much if anything. Immediately on entry to this world, however, we begin to learn. Some babies learn fast; some learn slowly; some learn much; some learn little. It is the contention of the psychologists that these differences in conduct reflect, in part at least a difference in intellectual potentialities. While it is true we can only measure intelligence by what it does, all investigation and observation point indubitably to types, degrees of complexity, sensitivity, durability of impressions,

complexity of interconnections and rousability of such traces, as being at the basis of the acting which we call intelligent. That is, just as there are differences in drives so there are in mechanisms; in the present instance, in that of thinking.

Coming back to the question of standards and yardsticks, it becomes apparent that if we find out what a very large number of children, some rich, some poor, some female, some male, some this and some that, can do, intellectually speaking, we finally find that there is obtainable a rough average for each age, an average constantly being refined. Thus, taking boys and girls exactly fourteen years of age, the country over, we find that they can solve a problem of a certain degree of difficulty, they know certain things and, in a word, show a certain degree of adaptability, a certain ability to meet and solve, in terms of facts and past experience, the problems offered them. Some can do more at that age, some less, but there is an average. This average we call normal. Remember that as yet we have said nothing about the boys of that age some hundreds of years ago; that is another story. Best present-day surveys show a certain average

ability. If we do the same for thirteen-year-olds and for every other age from three to eighteen, the age at which the standard tests tend to end, and assume for the purposes of measuring the intelligence of older adults that they are all just eighteen, we can arrive with this scale at a very interesting relative or proportional figure which at once classifies each person tested. This figure is called the intelligence quotient, or I.Q. Thus, a boy who is actually, that is chronologically, ten years and who can do all of the tests for the average ten-year-old has an I.Q. of 1 or 100, obtained by dividing the intellectual age on the scale by the actual age. Thus, again, a boy ten years of age who could do only the tests of the five-year level or group would have an I.Q. of .5 or 50, depending on how we wish to write it. A boy five years old who tested ten on the scale would have an I.Q. of 200.

This relative measure of the degree to which one's intellectual age is on a par with, below or above one's proper intellectual age as determined on the basis of chronological age and the average for that age, is a very important one. It enters, these days, into all sorts of considerations. There are certain jobs which

need a certain minimum I.Q.; there are others which can use all that any individual has to offer. But, and this is extremely important, it must always be remembered that not merely intelligence, but many other things in addition to that valuable asset should be considered. There has been a tendency, happily now abating, to rate an individual's value to himself and the world in too exclusively narrow an intellectual sense. Sometimes, while the mechanisms are good, the drives are poor!

Our survey of abnormality begins, then, with this understanding of what is called the I.Q., in which scale 1 or 100 is normal for any age. Naturally, one finds any and every degree of abnormality in this trait, both up and down the scale. Individuals with the intelligence of a normal five-year-old or less can be found whose actual age is twenty and over. We call varying degrees of such sub-normality idiots, imbeciles, morons, border-line, retarded and so on; the essential fact which makes these purely qualitative names valuable is the quantitative I.Q. which goes with them. The low I.Q.'s just cannot cope with problems or facts of a degree of complexity or abstractness beyond their level. Apart from that deficiency,

their learning, like that of anyone else, can progress every year. They cannot become brighter; they can become more proficient on their own level. A child of fifteen with I.Q. of 50 is different from a mature individual of thirty with the same I.Q. That difference is partly due to the fact that the mature individual while not actually more intelligent, does know more things, has had more experience, and is, still more important, more mature in other ways, has more character, more self-assertiveness, and the like. Exceptions, of course, can be found to any such generalization. One must be careful in these matters. Human nature is apt to flourish in queer patterns and to break out of the confines of rigid classifications.

One further consideration in this field: the general cause or origin of what is called feeble-mindedness. Leaving out its distant historical origin, thought by some to be due to the intrusion and the consequent present-day reappearance of strains of an earlier and lowly race of humans, the real problem is its present origin, *i.e.* what families show this trait and tend to reproduce it? It is a curious thing, but an interesting and socially happy fact that

much feeblemindedness is due to a relatively small portion of the population. There are apparently isolated cases, but the inmates of a local institution in any given section usually bear rather close relationship to one another. This fact plus the fact that most if not all, or at least all true feeblemindedness, is a matter of birth and heredity, makes it easier, once we adopt a working eugenics programme to control the origin and therefore the whole problem. Children do not become feebleminded by being kicked by the family mule or by being dropped on the usually imaginary tiled bathroom floor; they become so in virtue of a deficiency of endowment due in its turn to deficiencies in one or both parents. It is fair to state, however, that cases of permanently or temporarily arrested intellectual development due to ill health, accident, and the like exist, but arrested development is not true feeblemindedness, the latter existing from birth and the former beginning at a definite point with normal development prior to the arrest. Cases of glandular failure, particularly of the thyroid, perhaps also of the pituitary, may result in arrested development of a kind quite unlike what we have called true feeble-

mindedness, but there is also a school that claims that all feeblemindedness is due to just such definite deficiencies, of various sorts, and that eventually science will find the cure, medical or surgical, replacements or readjustments for it. This is, of course, now merely a promising theory, but one would be rash to deny its future possibilities in the face of what has been done and is being done now.

From the point of view of intelligence as a type of conduct, as a mechanism and tool, as an expression of past learning and experience functioning in a present problematical situation, the foolishness of some of the old beliefs becomes apparent. For example, the theory of stigmata. It was once held, according to a school of early speculators, that feeblemindedness was writ large in the person's face and features and general physical make up. Thus, large, pointed ears, a badly shapen, cleft palate, an asymmetrical face, extra fingers or toes or too few, too small a head, or one too large—all these were supposed to be the outward and visible signs of an inward deficiency. But one's experience, if one is observant, will contradict this constantly. I know men of very small head size, others of very large head

size, people with the halves of their faces quite unmatched, with all sorts of queer deficiencies and superfluities, and they are all among the wisest of the wise, super-intelligent. One's brain is not be judged by size or weight nor yet by shape, but by its chemical and molecular makeup and the state of physical health in which it is, plus the coöperation it gets from all the rest of the body. We are not so simple as to be judged by a bump here and there on the surface.

Comparatively speaking, the intelligence of men and women is the same. What makes the apparent difference, daily becoming less apparent incidently, is the different interests which men and women have, the different training which they have received as children, the different ideals set before them when they were young, the different taboos and restrictions hemming and hedging each. Man's intelligence is shown in typical masculine directions, woman's in directions typically hers, but in a society in which the females were in the position of power, we would find matters reversed. Sex is no barrier to intelligence and intelligence no barrier to sex. So, also, with race. There are racial differences; to deny that

would be to fly in the face of facts, but the differences are minor in their actual amount. It is the compound interest of experience and opportunity which develops the slightly better by birth into the vastly better by training. Two boys born at a birth, one of whom is, say, but a fraction of one per cent. better endowed, will find that endowment, other things being equal, counting up and up until middle age will find the two differing by an apparently infinite degree of ability. Incidentally, this leads to another and very valuable consideration, namely: that were our educational devices and procedures, particularly those that beset us when very young, improved upon by even an infinitesimal degree, we would, socially, one and all reap a tremendously enriched harvest of culture and living. Naturally, this holds true of the so-called backward races. Whatever may be due to a lesser inheritance, it is certain also that they are not developing their possible maximum of ability due to social and educational restriction and errors.

Finally, when we consider the fact that as regards our present population, each generation is, on the whole, largely recruited from the strata of intelligence that are not the high-

est, to put it diplomatically, one may wonder, in an historic sense, what is present-day intelligence as compared with the past and what is the outlook for the future? In the past, when the processes of natural selection were more widely and more strictly applied, when there did not exist all the present-day social agencies for preserving the weak, the deficient and the stupid, these tended to die off before they produced their kind. Now we raise them, educate them so far as possible, and make it likely that they will produce more descendants than the more self-controlled of the higher levels, where all sorts of considerations, economic and otherwise, tend to reduce the number of biologically possible progeny. It has been roughly calculated on the basis of some evidence, that the average intelligence of the freemen of Athens, a small city, in the years around 500 B.C., was as much higher than the average present-day Englishmen as he is higher than the average negro. This may be too hard on the negro, but there is considerable evidence of various sorts that goes to show that, intellectually speaking, modern civilization favors the survival and the perpetuation of the mediocre. The average intelligence of the population of

this country, judging from a wide sampling and testing conducted during the war, is somewhere between that which is normal for a thirteen-year-old and a fourteen-year-old child. Added to this intelligence is mature physical power, often unrestrained and untrained emotional pressure so that it is no wonder we are so queer; it accounts for our failure to use all obtainable evidence for the solution of our social problems; it accounts for our often too conservative attitude as individuals and as groups; it accounts for the many and varied mob movements of various kinds throughout the country from anti-evolution to anti-vaccination. We are grown up children with a vote, but with a child's vision just the same and a child's understanding and sometimes his pettiness and " won't play " spirit.

This naturally leads us to a consideration of the abnormalities of other than the intellectual side. We are wont to say to one another when we meet mornings, " How are you? " and perhaps discuss the implied health. Perhaps we are now-a-days shading a bit toward making the morning salutation one concerning merely business, but I would like to see a day when people would be interested in one an-

other's emotions and gravely inquire, however formally, after their condition, for they are paramount in one's career. However great one's intelligence, it is, as we have shown, merely a tool. However keen one's mind, if one's attitudes and emotional conditionings are wrong, it means that that intelligence will be devoted to wrong ends. This is the basis for much of the practical application of the modern psychology. Let one's emotions be proper to the time and the group, one's attitudes healthy, sane, and balanced, one's likes and dislikes, desires and aversions normal, then, whatever the degree of intelligence one has, it will help to work out the needs and hopes of the rest of the personality, be a serviceable tool not a hindrance, lead to a well-knit personality, not a split one, on whatever level it may be. One can be gifted with a high I.Q. and be a nuisance and a bore to everyone including one's self; one can have quite a humble intellectual endowment and be of service to all, grow constantly, live a rich life and a creative one. It is a matter of coöperation of the various traits of the organism, at bottom, and intelligence is but one of these.

What do we mean by emotionally abnor-

mal? It is not entirely a matter of lessened or increased emotions, as in the case of intelligence, but as much a matter of having emotions at the wrong time, with reference to the wrong things, or in an improper degree even when the time and reference are correct. Thus, I know three adults, two men and one woman, people of culture, intelligence and learning, who are all afraid of cats, plain, ordinary house cats. It is not just a dislike of cats; they cannot literally be in a room with them. To handle them would be torture. Once when a large, friendly cat of mine crept quietly into the room behind the chair on which one of the men was sitting peacefully and talking of art, and jumped confidingly and friendly into his lap, purring and playing, I thought there would be murder done, and not on the cat either! Most certainly this is abnormal, unusual, indicates a lack of adjustment, is indicative of improper emotional reactions. To be sure, it is not such a failing as need make the individual particularly unadjusted in general to his environment; it is not necessarily indicative of other and further maladjustments and emotional unbalance. We can eliminate cats for the most part from our environment if we do not like them.

However, suppose the reaction just described, the non-rational fear of cats, was, instead, a fear-of-men-with-beards. Still worse, suppose it was a fear-of-all-females, or a fear of all other humans. Then one's whole adjustment to life would be impossible. One could but flee to the desert and wait with fear and trembling for the shadow of a human figure on the horizon. When I say such fears are non-rational, I mean they are not due to reason and cannot be undone by reason. They have a life of their own, and reason is again but the tool for the moulding of life in terms of them. Suppose, as is not an infrequent condition, a person is afraid to be alone, must constantly, literally every minute, have someone with him. Suppose a person is afraid to leave the house and remains within four walls for years and years. Such things as these are emotional conditions which so interfere with the normal conduct of life that the individual becomes a loss to self and to the group. Such fears cannot be reasoned with; the individual may be the first and most insistent in saying that they are foolish, that they ought to be overcome, that they are nonsense. Saying all this, however, plus tears, plus threats or

promises or rewards on the parts of relatives or friends, will not change the situation. For the mechanisms and the patterns involved in such habits are not accessible to ordinary suggestion or association. They lead a quasi-independent existence and methods other than the usual argumentative type are necessary to mould or re-mould them, to change or dissolve them. Nor will medicine, in the ordinary sense of the word, have any or much effect. To be sure, such people are sick; sick quite as much as if they had typhoid, but the cure is different from that needed in the latter case. Indeed, until recently, there was perhaps no cure; now one exists but the application is difficult, long-drawn-out, often expensive and not yet fully understood by people in general.

It is only fair to repeat here an idea already spoken of in another connection, applying to both intelligence and emotions, namely: that in the case of both abnormality of intelligence and of emotions, it is not a matter of no intelligence or no emotions, or intelligence or emotions of so different a nature that they are not really the same thing, but rather always a matter of the amount, the application, the direction of activity, the coördination of needs,

desires, purposes. The insane can reason, but incorrectly and to wrong conclusions from mistaken beginnings. The emotions of the neurotic are authentic emotions, but misapplied, unbalanced, subject to wrong stimuli. This is something that must be constantly kept clearly in mind or we will fail to understand the behavior of the abnormal or apply the remedial technique of modern psychology.

Perhaps the best approach to this whole problem of the emotional abnormalities is through a consideration of what is called, not wisely, the Unconscious, for as ordinarily described, the Unconscious seems to be particularly conscious. Words are misleading, particularly abstract words, and we can perhaps make clear the distinction involved in simpler language. If we begin with consciousness in general and that mass of habits, thoughts, memories and emotional attitudes which goes by the general term of personality, it is easily apparent that this personality is not ordinarily a whole, completely knit and interwoven mass, but a more or less loosely associated group of sub-units. Thus, we show what we call one side of our nature to, say, teachers and parents; we have another for

chums of our own age; we have still another for a dear and intimate friend; still another for our own consumption. This is, of course, figurative, for we are we in all these situations, but it is true that in such different situations we tend to exhibit and to inhibit certain things. We live in the immediate environment in question, changing as we wander from one to another or as new individuals accost us, and as time passes. We change, yet always remain the same. While we are talking, say, to the Sunday School Superintendent, there may be some thoughts and impulses which we will not overtly express. Indeed, we may even actively put them out of our consciousness, as unfitting, incongruent, discordant to the situation in question. There is nothing queer about this at all. It is quite natural, and we need but carry this a step further to see the significance of what Freud has called the Unconscious. Suppose that we have learned to repress and not to think about certain very natural and very fundamental aspects of original nature—sex is an instance of such a fundamental. We were told, early and often, that nice little boys and nice little girls never thought about such things, never, never. We were punished,

threatened, made to form habits of repression and inhibition.

All that, most emphatically, does not mean that sex has been eliminated. It merely means that we have learned not to allow thoughts of such things to dwell in consciousness under ordinary circumstances. Drives, as we have seen, however, are fundamental, so the drives and even memories are there none the less, or rather, the activating structure and its habits, the impulses, the desires. When, how, where, and under what conditions can they and do they find expression? They find expression at such times and under such conditions as the repressing habits and influences do not operate, namely: in daydreams and slumber dreams. This is most emphatically not to say that all dreams deal with sex; that is a hopeless exaggeration that has done more harm than a little. It does mean that impulses, of any nature, thoughts of any kind, feelings and memories denied expression in the moments of ordinary waking consciousness, do tend to find expression when the censorship of daily habits and social espionage and all that are absent and we wander in a world of our own making and that suits us to that extent.

The so-called Unconscious, then, is simply a group of thoughts, memories, experiences, feelings, emotions, and all the other things found in waking consciousness which have no adequate opportunity for expression under ordinary waking conditions. They are the step-children of the individual's experiences; they are forbidden; sometimes wisely forbidden, sometimes foolishly so. We may go a step further. It is not merely that the thoughts and impulses in question, sex or whatever they may be, do not take part in the ordinary life of consciousness, it is also true that to a certain degree they literally cannot do so. They are antagonistic to the rest of the material of consciousness as experience and teaching have organized it, and they have few associations or connections with the rest of that material. They are, technically, more or less dissociated.

This suppressed material and that of the ordinary ways of thinking are not, so to speak, acquainted with one another. They are not on speaking terms. To use another illustration, which, like all illustrations, aims at making a point clear but must not be taken too literally, we might think of a large movie screen, on which our thoughts and feelings play. The

troupe that acts during the day is a different one from that which performs when we are asleep, hypnotized, under the influence of drink or drugs, in a stupor, on an emotional splurge, and so on. The actors in the one group will not and even cannot perform with those of the other group. They belong to different unions.

All the above will require some qualifications and admissions of some exceptions. We had best illustrate. Thus, you are now conscious of the words of this sentence as your eye meets with each successive group, and you become, gradually, aware of the thought I am expressing. You can become aware of other thoughts, closely or remotely associated with what we are now writing. Thus, if I ask your name, you can be conscious of it. If I ask you to tell me what you dreamed last night, very seldom will you be able to say much about the contents, thoughts and feelings of the dreams except immediately upon awakening, and then only symbolically, as we shall see. As the day advances, the dreams tend to fade, and we more and more change what little we do seem to remember.

The so-called Unconscious, then, is simply

that tremendously large mass of experiences of all sorts that is not knit into the fabric of our ordinary life. The process by which it grows is significant also, for it has its own life and being and grows as rapidly if not more so, in some respects, as the ordinary conscious mass. It grows, partly, by mere discarding. Some things we do not readily remember may appear in dream or other abnormal state. It grows, too, and mostly by forceful repression. Thus, as children, we all more or less tended to be quite unashamed of being seen naked. Many of us doubtless shocked family and visitors by suddenly appearing from bed or bath sans the refinements of cultured society. We were also wont perhaps to see our sisters and they us in the same condition. As we grew older such things became taboo, met with reproof and severe punishment, with scowls, sighs and worse forms of social disapproval, and so to keep the love of those queer adults who ran our world, we learned to do as they said and to literally force ourselves to be more circumspect, until finally the impulse, the natural propensity apparently left us. When I say that it was a natural propensity, it is clear that I mean that it is not a part of original,

untrained human nature to wear clothes. The wearing of clothes leads to the feeling of shame when we lose them; shame does not originally lead to the wearing of the clothes. This is but one simple example of the prevalent confusion in reasoning about psychological matters.

The material of this repressed or dissociated mass of experience is the result of the conflict between the ego and the social order, plus, undoubtedly, some misunderstanding of the purely physical environment. Let us look at some examples of this. The young child, as we have seen, is born able to feel afraid. He is not born afraid of many, many things which he later does come to dread as the result of experience. Some of these experiences, occurring very early, before the period when he has learned to talk, will remain with him as emotional habits and attitudes and will not be subject to recall or verbalization or modification by any conscious process in control of the individual. They may be forcibly overcome; they may be overlaid with newer and more mature habits, but the early traces will none the less be apt to reassert themselves in moments of emotional stress and strain and

when in surroundings that closely resemble the ones in which the experience originally occurred.

The people described a few pages back who were afraid of cats are, without question, acting in accord with infantile experiences of this sort, plus, perhaps, experiences in childhood when they were reinforced. They cannot, as a rule, recall the experiences which laid down the pattern of the habit. In such cases, particularly if the experiences in question occurred after they learned to talk, or if they later formed the habit of putting into words a pre-language experience, then they can perhaps recall the episode under certain conditions, through certain association tests, under hypnosis and so on. Such episodes will none the less influence their lives, help to direct their conduct, color their attitudes toward all animals, cats included, and even become in some circumstances a fear of fur in general. It is the province of what is called psychoanalysis to remove such fears and inhibitions.

Our heredity and our original nature, the old Adam as the theologian called it, is not easily outwitted. In spite of social repression and the force of punishment and social disap-

proval, we find ways to express the forbidden. What Stekel rather figuratively calls the " organic language of the soul " is common to us all. What we cannot express in language, what we dare not represent to ourselves in words and conscious experiences, we do represent symbolically, in substitute ways. Thus, among other ways of self-expression, there are posture, mannerisms, tones of voice, and forms of facial expression. The stutterer, by his hesitancy in speech, is both fearing to express what may meet with social disapproval and yet at the same time endeavoring to express that forbidden material. His conflict shows itself in the way he talks.

The neurotic, desirous of attention, affection, and petting, who yet fears that he or she is too weak or too unattractive to gain such things in the normal way, uses abnormal ways and by the more or less undeliberate and unconscious assumption of a sickly and weak nature calls on the sympathy of others, and often gets it. We can show our deeper needs other than in words; what are called functional afflictions of the various organs of the body, disturbances of heart, stomach, bowels and so on, which show no real disorder and bear no

signs whatsoever of disease—these things are but the outward and visible signs of inward and unconscious strivings to find happiness, which happiness is not sought for in the normal way because of bad training, improper conditioning of the emotions, false valuation of experiences, all of them usually early in life.

Dreams are another medium for the expression of those feelings, memories and attitudes which are forbidden or denied ordinary exercise and opportunity. When we dream we are free to feel and say, within limitations, what we cannot or do not, however great the desire, adequately live or express in waking life. Even in dreams, however, there are qualifications, hence their bizarre and fairylike nature. Dreams are, like the organic language of the soul, forms of symbolic expression, sometimes very complicated, sometimes less so, depending on social and moral factors; saying much, yet doing so with an eye on other things. Thus, a child's dreams are usually rather frank. If he is denied a second helping of desert at dinner, he often can and does dream of owning a whole bake-shop and ice-cream parlor combined, and revelling to his heart's desire in the glories of free indulgence. The

explorers, in a recent polar expedition, when they ran short of food, continually and frankly dreamed of patronizing the restaurants of their choice and thus doing what actual life, in the particular circumstances of their food shortage and isolation from civilization, denied them. Such frank, undisguised, simple dreams are the exception, not the rule. Ordinarily we do not act so simply, for ordinarily there is, as we have seen, a conflict, either between the individual and his social group from which he seeks approval, or between one side and another side of the individual, between his so-called lower self and his so-called conscience or better self.

As a matter of fact the old idea that human nature is bad is as false as the more modern one that it is good. Human nature, when and as it is born, mere untouched and unmodified heredity, is neither good nor bad; it is neutral and is the basis for a character that may later on, in social terms, be quite properly called good or bad. Unfortunately, good and bad, socially and biologically speaking, do not coincide. Society, in the interests of supposed but often purely imaginary values, distorts and ruins the biological health of the individual.

This is merely another way of explaining the origin of the conditions of emotional abnormality we are now considering. Biological good calls for the use and development and the coördination of all the traits of human nature, wisely used and subject to social control, but not just mechanically or forcibly repressed. The healthy child, in a very real sense, is the good child; the bad child is ill. The healthy child, may be a tremendous nuisance to unhealthy adults, but that is another story. The criminal is sick, as is the patient in the hospital; he is not sick necessarily physically, but psychologically. We train our criminals, as we train our neurotics to be just what they are, and to lay the blame on human nature and heredity is to shirk the basic problem of understanding and reform.

But we must come back to dreams, both individual and social, though the latter are more often called myths and folk tales, with a mechanism and technique much the same. The technique involves symbolization, condensation, dramatization and a host of other things which can be explained more simply by example and analogy. Thus, a young woman dreams that she is walking down the street

behind a man of whom she is very fond but she cannot catch up with him. Something holds her back, and there is a feeling of anxiety. There are agencies vaguely felt in the dream that interfere with her catching up. There is a very strong wind blowing. This wind does not bother her, but it blows the man hither and thither. He tries, apparently, to resist. The wind is too strong, and finally blows the man up in the air where he remains caught on the cross of a church steeple. The woman awakens with a sense of anxiety, helplessness and weeping.

Now, what lies behind that dream? As a matter of fact it is relatively simple though it does embody the thoughts and feelings that the woman has not permitted herself to think about during waking hours. It is a case of more or less voluntary refusal to think about the problem involved, though there had also been a certain amount of social teasing and pressure, designed to make her cease worrying and fretting. Hence, even in the dream, matters are not exactly clear; they are so disguised, through the technique of dramatization, symbolizing and all the rest, that the dream need not convey to the waking consciousness when it

is recalled in the morning, the real facts. The dream gives expression to past experiences very tactfully! Indeed, strange as it may seem, the woman did not connect her dream with her life at all. She was puzzled over it, showing very clearly the fact that we can dream, express wishes and desires, remember that dream, and yet say honestly that so far as waking consciousness is concerned, we know nothing of what it all means. So beautifully can one play a game with himself!

As a matter of fact, the woman was in love with a Protestant, like herself. The man apparently once had loved her, but of recent months his attention had been caught by a charming young Catholic girl and he had quite neglected his one-time friend. She had felt hurt, and had wished to win him back, fearing his possible engagement to the Catholic and also his possible conversion to that faith against which she had no real animus but merely the attitude of one of another faith. The relatives of the other girl encouraged the man's attentions, welcomed him to the house, and even persuaded him to go to their church. The dream is now clear. It expresses exactly what her former thoughts had expressed, but

dreams do not ordinarily deal with words and unvarnished circumstances, attempting to represent instead the wishes and conditions of life in much the same way that a cartoon represents social or political facts. It is a sort of primitive picture writing, a sort of shorthand for the expression of the emotions, a way of becoming conscious of that which for one reason or another we must not, should not, dare not be conscious of!

All dreams are not so clear, but all dreams represent a conflict, just as this one did, though this is not always clear to the dreamer or the listener. Most certainly, the dreamer in this instance did not wish the man to be caught by the church and the woman in question. The wish was that the situation might be saved. Dreams ruminate just as waking consciousness does. Dreams muse, play, compare, examine, come to conclusions. But always, somewhere in the dream, is a wish, or a conflict. A woman, a recent widow, with two charming children whom she greatly loves and without whom she would rebel utterly at life, dreams that the house catches fire and that the two children are burned. Naturally, and quite correctly, when in her waking conscious state she

will indignantly deny that she wishes the children to be burned. It is certainly true that she wishes nothing of the sort. What then, and where, is the wish? A little judicious inquiry soon brings this out. She would like to marry again, but the fact that she has two young children makes it impossible or at least unlikely. Also she wishes to go back to her art work in a studio and again the young children interfere. The dream, the details of which we have omitted, is now clear. She wishes for her freedom. The dream complies with this wish, and in so doing ignores or distorts other wishes. A dream cannot do everything!

But it does solve, for the dreamer, in her dream consciousness, a conflict and fulfills, for the moment, a wish, even though it ignores other wishes and better ones. The dream situation temporarily fulfills, in imagination, one need even while it ignores others. It satisfies certain desires, often unacknowledged when awake, at the same time denying others that the individual, when awake, would never relinquish. It is a solution on one level, in one sphere, according to one set of standards and purposes, and is in no sense an indication

that the individual, when fully conscious and when aware of all her obligations, duties and social ties, would agree with the dream situation.

This last dream illustrates, beautifully, the difference between waking and sleeping consciousness. In real life, when quite awake, when cognizant of all her needs and all her obligations, she plays the one against the other and tries to find a sane, balanced, and socially satisfactory solution for her problems. In sleep, with all this reasonable attitude gone, her problem is still the same, but she reaches a more simple, a more primitive, a more infantile solution, a solution which her waking consciousness would never accept and probably never even formulate. It is not to her discredit that she thus dreams. Dreams, still further, often reveal matters of older standing. Thus, a boy who had a habit of stuttering badly, was wont to dream of being smothered, of being choked, of being hit and forced into a box. After such a dream he would awaken badly frightened, sweating, with heart pounding and be unable even to cry for help, though he still felt on awakening that he needed help, for something awful was about to happen.

These dreams gave the clue to his original troubles, *i.e.* a series of frights, accidents, and hazings that other boys and a nurse had administered and some slight family investigation brought out the fact that his speech difficulties dated approximately from that time. Here the wish or wishes are more concealed. In fact, it is the difficulty of ascertaining what is the real wish of the dream and hence its significance, which has led to the distinction between what is called manifest and latent significance. Manifest wish is not always the real wish, which may be latent and has to be found through analysis of the dream and through certain methods of association.

Incidentally, may I again point out that we must not worship words, and so if we object to the term "wish," which is so common in Freud's writings, as applied too universally and consistently to dreams, we will see the real facts just as well if we think of "conflict" and remember what we said about dis-association and sub-units of the whole personality.

We all dream; perhaps we dream all night long. It is difficult to establish such a fact, but the indirect arguments would tend to show that it is so. Consciousness, in other words, is

continuous. It is simply now at one level, now at another; it is, at one moment and under certain conditions, concerned with business matters and at another moment and under different conditions, concerned with entirely different affairs. Indeed, from one point of view, the dream is the protector of sleep, in that stimuli which would otherwise awaken us, and which would have to be interpreted in terms of everyday common sense, can be woven into the fabric of our fantasies and leave us still sleeping. An experiment brings this out naïvely. Suppose one administers to several sleepers, in the same room, a stimulus harsh enough to finally awaken them, but not to immediately do so. Let us suppose, also, that all the sleepers have been listening to the same music or have seen the same play just before going to sleep. They will all have a dream, but that dream will not be the same for each of them, for the factor of personality, repressed and unsatisfied desires, will color the rest for each of them. Let us say, then, that they have all read, before retiring, a book on the treatment given the early Christians. And let us say that we used as a stimulus a roar. The background of their waking consciousness as

they all went to sleep was the same, the stimulus was the same, but each will weave the stimulus, plus the common experiences prior to sleep, into a pattern in which their own individual problems will predominate. The dreams will have something in common, depending on how alike the individuals are. They will be different in detail and general coloring, depending on the differences, the problems, wishes and conflicts.

Dreams have no power of forecasting the future any more than has ordinary thinking. Dreams do often represent as going to happen what actually does happen. This is due to no different technique than ordinary prophecy. I can think, consciously and deliberately, that so and so will happen next year. If it does happen, I pride myself on my good judgment. If it does not happen I forget it and keep quiet. If I dream that a certain house is going to fall down and it does, I am apt to become excited, unless I am sophisticated, and rashly believe I had a vision in my dream. The most frequent instance of dreams being prophetic is that of the death of some person. The explanation, in terms of sober psychology, is simply that our eyes have noted and our ears

have heard facts and conditions which we did not consciously note and dwell upon for, as we have pointed out, we get more stimuli every minute of the day than we pay deliberate attention to. In dreams the points and facts we noted may weave themselves into the fabric of that level of consciousness and we may represent to ourselves the death of the person in question, and when it happens be much surprised and apt to endow ourselves with mystic insight into the future. Of course, we forget the dreams that did not come true. In other words, in both dream and waking consciousness we may represent events of a future time, and in both instances, if we have observed correctly and sufficiently, we will be correct; if not, we will not. We tend to forget, conveniently, the errors we have made and brag about the successes.

This then is the proper understanding behind the Freudian saying that all dreams represent the symbolic fulfilment of repressed desires; it is true and yet not true. It needs qualifications, for the real desire may not be what is shown on the superficial examination of the dream. This fact, that the real wish of the dream is concealed and hidden, is due, in

Freudian terms, to what is called the censor. If we understand more simply that it is due to the fact that the waking and working personality does not permit the too clear representation of certain wishes which it has been taught to believe bad, ignoble, low, and that it is merely the force of habit which does the censoring, then we will appreciate the truth and avoid the error. It is unfortunately true that many physicians who have made notable contributions to the psychological understanding of human nature have not been students of psychology at all, but have invented their own systematic classification and their own terminology. On the other hand, it is also true that many so-called psychologists, particularly those of the inspirational school and the optimistic uplift Pollyanna persuasion, know little or nothing of biology and medicine. This makes it difficult for the lay reader, who cannot very well study the author and his right to express an opinion before he reads a given book. It is the reason, nevertheless, for much of the contention in academic professional psychological circles against Freud. But Freud, rightly interpreted, is a rich mine of knowledge

and technique concerning the ailments and the cures for human nature.

Freud is often thought of as the modern advertiser, par excellence, of sex, sex and nothing but sex. It is true that a specialist in cancer will naturally write of cancer and that his books will be so full of that disease that those reading them may well wonder if we are not all smitten with the growth. So with Freud. Having made a study of those who were neurotic, and having found that they all had sex complexes, one should not therefore jump to the conclusion that all nervous trouble is due to sex. It isn't. It is also true to say that the chances are that sex will be found as a part of the problem of a nervous individual and for good reasons. It is not that sex is intrinsically more important than other drives and mechanisms and aspects of human nature, but that it is the one which modern society has most repressed, hence it is the one with reference to which more mistaken ideas can come about and more erroneous emotional habits can be formed. We can make a comparison omitting details, with the beliefs and customs of a supposed primitive tribe described by an explorer. The tribe almost certainly has either

disappeared or changed its social habits by now, but when found it was a ruling custom that no adult might see any other adult eating! Eating was taboo; it was sacred. It was indecent, wrong, and all that to eat in the presence of another member of the tribe. Naturally, from birth up, all sorts of repressions would have to be firmly instilled into the growing children. It is natural to eat and to share what we eat with others. Eating is a social function in every realm of society. Thus, the very repression involved would magnify what is, after all, simple. People would brood on what needs no brooding. So with us, that is, modern society. What is natural, through various theological and metaphysical reasonings, we have come to call indecent. What is natural has come under the ban of social life. Hence, the greater interest in it. Hence, too, the greater likelihood of nervousness in the individual finding a partial root on the subject of sex. Were it approached as naturally as we approach eating, the problem would be on the way to solution.

On the other hand, it is true and the wiser and more balanced of modern thinkers see it clearly, that we can develop nervousness and

poor habits of adjustment with reference to any of the instinctive propensities of human nature. The soldiers in the war who developed what is called shell-shock certainly did not have sexual complexes; their conflict was not in the realm of sex at all, but in the realm of self-preservation as contrasted with the desire for social approval. It is time we defined this word complex, and examined more closely what neuroticism is and what causes it. The gentlemen described above who were irrationally afraid of cats, said fear being based on early and repressed and undigested experiences, had what would be properly called a complex on the subject. I know a business man, a professional man, and a married woman who always, no matter how the conversation flows, manage to bring in statements to the effect that while other people are dishonest, they are perfectly honest. It sounds foolish, but any one of these three people can go from cabbages or kings, prize fights or Florida real estate to the one topic of his or her own honesty. Now, without question, it is correct to say they each have a complex on the subject. Defining the word in another way, we can say that a complex is a mass of experiences, memories, and associ-

ated emotions of which the individual is not ordinarily conscious, as a whole, and of whose real significance the individual is not conscious. Thus, the undue emphasis on honesty, is at least a reflection on their actual honesty. Like the lady in Shakespeare, they protest too much. They accuse themselves since they excuse themselves. They are trying to bolster up a decadent and slipping self-respect.

Now it would not be fair to call any of the cat gentlemen or the group of too-protesting people neurotic for just the conduct which we have been discussing. Such isolated and otherwise unreinforced peculiarities and dissociated habits we call merely eccentricities and, depending on their social value, we rate, praise or dispraise. If a person's conduct is, in respect to many things, as peculiar as the instances we have taken, and if the various complexes refer to one another and are coördinated, we will soon find it necessary to call him neurotic. In short and simple terms a neurotic is a person whose complexes and repressions make it difficult if not impossible to adjust normally to life as the group lives it. Putting this backwards, we might say that when the environment is not such as to give a

person a normal outlet for his needs and desires, he tends to form all sorts of symbolic adjustments, all sorts of defence mechanisms; in a word, to become that which we call neurotic. The doctors' offices, as has often been pointed out, are full of these people. They have, literally, nothing the matter with them, but they are not well. They are not sick actually, there is no physical injury or disease, but they are full of symptoms. They have functional disturbances of this and that. They cannot sleep; noises make them jump. They cannot stand bright lights. Their food fancies are peculiar. They do not get along with people. Nobody truly appreciates them. They are sadly misunderstood!

The neurotics are the poorly adjusted, the maladjusted, the too ambitious and yet too weak. They indulge too much in compensation and worry, too much worry about everything including worry about the tendency to worry! Yet they were not born that way, decidely not, though they may, like Shelley's plant, have been sensitive. To be sensitive does not need to mean to be neurotic. Adler, one of the leaders of the abnormal psychological schools abroad, has framed what he calls

his theory of organic inferiority and psychical or psychological compensation. Thus, a child born lame, or early meeting with an accident which cripples him, necessarily feels inferior to the rest of his companions. He cannot compete with them in sports and general activity. Hence he tends to develop what is not hindered by birth or accident, stresses and develops his mental abilities more than his companions do, but, for all his mental development, he still tends to feel the stigma of inferiority, so that a vertiable complex on the subject grows up and becomes a sign of the general maladjustment of the individual. Thus, while the dogmatic psychoanalyst often speaks of neuroticism as failure of present adjustment, it is clear that it is really this plus a history of bad adjustment in the past. On the other hand, it is usually true that what is called neuroticism is curable or changeable by meeting with conditions to which a perfect or nearly perfect and satisfactory adjustment can be made. Unfortunately, this seems to some people to mean to run away from difficulties and seek such situations as are so easy that they can be easily adjusted to. This is an error, in that no real adjustment has been made,

but that the need for it has been avoided. Hence an increase in problems brings on the old trouble. A neurotic should solve, with psychological aid, the problems which are his in his normal environment and learn to do that which he has to do gracefully and objectively.

As contrasted with the neurotic, is the group of psychotic or insane, though again the word must be taken in a technical and not in a morbid sense. It cannot too often or too thoroughly be emphasized that mental disabilities, like physical ones, are due to conditions and circumstances, are definitely caused by concrete factors and, theoretically at least, are remediable. The older point of view, according to which it was normal, an act of providence, in no sense a disgrace, to fall victim to or even to die of various physical diseases, but according to which it was shameful and ignoble to have insanity in the family, is happily dying out. When we face the facts of insanity, as we have those of smallpox, typhoid, and yellow fever, we shall see the cure of the condition nearer if not immediately at hand.

Within this field of abnormalities there are divisions and differences of opinion as great if not greater than in any other division of the

whole subject of psychology. The reasons for this are clear: the investigation is recent; the difficulties are immense; some have discovered important facts and conditions in one direction and others in still a different direction, and in the enthusiasms of their own research they often either forget or deliberately ignore the work of others. Here, as in other matters, we will indicate extremes and endeavor, at the same time, to present a well-balanced picture of the middle point of view, a consistent picture of mental and emotional disturbances of the minor and major varieties. Concerning the neurotic, as one division which we have already sketched, we need say little more other than to point out the fact that Freud and others tend to recognize two types of neuroticism, namely, so-called neurasthenia and the anxiety neurosis, that type of neurosis which is characterized by a more or less constant sense of dread and tension, a waiting for something dreadful to happen, which of course never happens. This tension is supposedly due to the unrelieved tendency of patterns and structures to act, the acting of which is forbidden by the moral conscience and the social taboo. It is the old story of repression at

bottom. We all occasionally experience something of this when we have that sense of something about to happen, which we cannot reason out and which we cannot, consciously, dispel. The term neurasthenia is a misnomer in its literal sense, for the nerves in no case of physical health are weak or exhausted as the word implies, but are merely acting in terms of patterns and habits which, as we have said, are non-satisfactory for social adjustment and the welfare of the individual.

The next great group, again following Freud, are the psychoneuroses, types of mental disability intermediate between the neurotic and the strictly speaking insane. The sub-divisions of the psychoneurotic group are hysteria and the obsessional variety of mental disability. They carry further the disability of the sufferer; they emphasize still further the maladjustment; they involve sensory disturbance also, recalling the hallucinations and illusions of the field of normal psychology but, instead of being isolated and easily corrected by subsequent experience, they tend to become systematized and organized. The detailed study of these diseases leads one to a consideration of physical condition, some schools em-

phasizing the physical side to the exclusion of factors of experience, others just as foolishly emphasizing merely the mental and neglecting the physical side. We must always remember that conduct reflects structure; we act as we are built to act, and if any part of the structure becomes abnormal, to that extent the conduct depending upon it also becomes so. The influence of drugs, intoxicants, poisons, diseases, on conduct in general is large. It is not merely the particular organ attacked by the poison or disease which becomes modified in its conduct, but the whole organism to just that extent that the various parts of the organism depend for their proper action on the diseased or disturbed organ. The organism is literally a unit and acts as a unit, and while all sorts of compensations can be and are constantly made, it is still true as a proposition, theoretically and practically, that our conduct reflects our structure in a large and in a detailed sense.

It is worth our while to look a bit further at this matter of structure and associated mental and emotional changes that seem to go with the physical changes, and it so happens that modern research has demonstrated, practi-

cally as well as theoretically, that there are certain organs which, while not in any true sense more important than others, do seem to centre in their peculiarities the basis of peculiarities of conduct. These are the so-called ductless glands, a survey of which we will now make. The body has many glands, a species of specialized cells which secrete, each of them, a definite chemical substance or substances. The glands which supply moisture to the eyes are not ductless glands but have definite ducts or pipes to lead the secretion on to the surface which they are built to attend to. The salivary glands are another example of duct glands. Incidentally, these glands are usually automatic in their operation, but they can be so conditioned by practice, experience and life in general, that they can be brought partially under the control of consciousness. Thus, for many of us even to think of a razor with lemon juice on its edge being drawn across the tongue will suffice to start the stream of saliva running in the corners of the jaws. Some of us, by thinking sufficiently sad thoughts, can bring tears to the eyes.

The ductless glands, on the other hand, have no ducts or pipes, and do not discharge

their secretions on the inner or outer surfaces of the body, but directly into the blood stream, which process is made possible because the blood circulates or flows directly through such glands. These ductless glands supply to the blood various chemical substances, called hormones, or messengers, which have a direct and powerful effect on the activity of all the major organs and thus indirectly on the behavior, particularly the emotional behavior, of the organism. In fact, it is not at all an exaggeration to say that the major emotions, apart from their complication with experience and the conditioning of early and later life are simply the physiological changes due to the activity of the ductless glands and the consequent modification of muscle tension, blood-pressure, and breathing. Thus, to take an example, suppose we have a peacefully resting cat, digesting its dinner, dozing and relaxed. We have it in such position that we can observe its process of digestion, can measure various physiological conditions. Then suddenly a dog is allowed to approach, bark and excite the cat. Digestion stops, breathing and heart beat alter, muscle tension changes, ears go back, the cat spits, and chemical examination

of its blood stream shows that substances from one or more of the ductless glands have been discharged in increased amounts into the blood stream, releasing energy and making for the quicker coagulation of the blood in case of wounds. The cat has been thrown into a fighting state, and could it speak it would report, undoubtedly, a condition of emotional stress and strain that we call anger. But it is angry just the same, whether it realizes it or not; the biological condition and the awareness of that condition are two different things and the awareness need not necessarily or invariably be present.

There are several ductless glands worth consideration: the thyroid, the pituitary, the adrenals, the parathyroids and the gonads or sex glands. That there are other true ductless glands is probable, but concerning those named sufficient is now known to make clear the general effect on the organism of ductless gland activity, either pronounced and momentary or continuous, and so to give a true picture of their significance. These glands do not, as is often mistakenly believed, act separately, but as a system or group of activators, though it is true that in certain individuals one

or more of the system may be particularly sub- or super-active to such extent that one investigator speaks of thyroid-centred types of personality, as contrasted with, say, adrenal-centred. But every normal individual has a gland of each type, however deficient and however necessary it be for the rest to bolster up the deficient member of the group.

The thyroid, a mass of tissue located in the neck, astride the windpipe, half on either side, is perhaps the best known, certainly the most popularly known. It is subject, under certain conditions of dietary deficiency, to enlargement and diminution of efficiency and has had a great deal of newspaper publicity in connection with public hygiene campaigns. The function of the thyroid, roughly speaking, is to control the rate of metabolism, to aid in the transformation of fuel to energy. What is called the basal metabolism rate is an index of the activity of this gland and a process of measuring its activity exists whereby it can be judged fairly accurately. A deficiently active thyroid, if very deficient, means mongolism when congenital and cretinism if acquired early in life. Mongolian babies, so called from their facial resemblance to the

Mongolian type of human, present the extreme picture of human vegetarianism. The extremely low thyroid, when present early in babyhood results in inert, lazy conduct, no mental growth, unhuman appearance, late or no teeth, wrinkled harsh skin, poor circulation, poor development of arms and legs, extreme physical awkwardness, all of which is really feeblemindedness. In fact, it is claimed by several foreign investigators that all feeblemindedness is a form of deficiency of one or more glands and hence remediable, for children and babies of the type we have described above often show remarkable improvement, amounting in some cases to apparently complete recovery, when fed the chemical equivalents of the missing ductless gland secretions. All feeblemindedness, however, is certainly not due to glandular deficiency, as there are other forms of deficiency, malstructure of the brain for example, which result in feeblemindedness and which glandular treatment does not improve. It is true and hopeful that some cases yield to this technique.

The too active thyroid is the opposite picture. Fast heart action, excitability, insomnia, too great emotional explosiveness,

high perspiration, moodiness, ups and downs, overbright, sometimes protruding eyes and heightened body temperature are a fair basis for investigation as to the existence of a too high basal metabolism rate. Symptoms are catching, as every medical student learns, so it must not be thought that all symptoms paralleling the above are an infallible sign of a too active thyroid, though they often are. Strangely enough, the cure is sometimes the same as for the deficient thyroid, due seemingly to the fact that the too excited thyroid, the overstimulated and perhaps overworking gland takes the opportunity of free supplies and rests.

The principal constituent of the secretion of the thyroid is iodine, not, of course, in metallic form, but in a highly complicated organic structure. Iodine is obtainable in some foods, notably fish, but is perhaps more frequently taken as a general thing in drinking water. It so happens, however, that certain localities have drinking water which is deficient in this important substance, being too chemically pure, or lacking the iodine salts necessary. In some such cases minute quantities of the necessary salts are sometimes added to the drink-

ing supply. In individuals in whom the thyroid is low in its activity, though not to that degree to make it pathological, immense improvement is almost always to be found upon adding the necessary salt to the diet in one form or another.

The thyroid, then, is not necessary to mere life, but is necessary to a good life. The parathyroids, which are smaller masses clinging to the two halves of the thyroid, are quite necessary to life, extirpation resulting in death through exhaustion. Their general function appears to resemble that of a brake or a governor on the excitability of the nervous system, and they are also concerned with the lime content and structure of teeth and bones, and perhaps in the nerve cells. The pituitary, which is a small gland about the size of a pea and located near the base of the brain is really two glands in one, a posterior portion which is associated with the tonus of the involuntary muscles of the body, and an anterior portion which controls the growth of bones and connecting tissue. Blood-pressue is also connected with the posterior and the whole gland is associated with anomolies of sex and stature. Dwarfs and giants of circus fame are sus-

pected, on present evidence, of having pituitary glands which are abnormal, the deficiency or excess of stature depending on other factors also, notably the time of life, whether before or after adolescence, during which the glandular condition is abnormal.

The adrenals, of which there are two, located on top of each kidney are, like the pituitary, double, composed of a cortex and a medula, that is, an outer portion and an inner core. The adrenals are the glands of combat par excellence, every stimulus that provokes the fighting response acting on them and they in turn on the whole organism through the effect of their secretions on the blood stream and thence on muscles and other organs. The gonads or sex glands, ovaries in the female and testes in the male, are concerned with two functions, being, in a sense, double glands, and numbering two of each. One function of the sex glands is a true ductless function, resulting in the sending into the blood stream of hormones which have a distinctly energizing effect on body and mind, and the other a duct functioning, in that they secrete and issue through the appropriate channels the sperma-

tozoa or ova for the production of new individuals.

There is no question that the public has a too optimistic and uncritical attitude toward the ductless glands; it is possible also to say that some biologists and psychologists are also too uncritical. When all is said and done, however, there seems to be no question that they do offer, in their chemical and physiological nature, a new basis for the understanding and the control of human nature. Medication of the glands, while still in a middle experimental state, does bring about what are often nothing short of marvellous changes; surgery is a close second, and researches from the point of view of insanity and types of personality reveal coördinations and correlations between gland structure and behavior which point out the road to a technique of cure and even prevention in the not-so-distant future.

This excursus on the ductless glands brings us back to the problem of insanity, a distinctly modern problem now that insanity is no longer looked on as possession by the devil or by evil spirits, but as a personality change, a type of abnormal behavior differing from the milder forms we have discussed in degree and

partially, perhaps, in actual nature, and involving sometimes physiological changes so pronounced that they can hardly be called merely functional. The insane are sick, and should be treated as such. They no more deliberately act as they act than the typhoid patient deliberately runs a temperature. In fact, so far has knowledge grown in this field, the very term insanity is under censure and is seldom used when really accurate language is employed. It is more proper to speak of " the insanities," for they differ among themselves as much as do the various types of physical disease. Still further, merely to pronounce a person insane is to give a listener, however skilled and learned, no real insight into the condition. Actually the word is losing its psychological significance and is becoming more a legal term; to be insane means to be the exhibitor of such conduct that one may be incarcerated, lest damage to self or to others result.

But what have glands to do with insanity? Here, again, the lines of medicine and psychology cross; here, again, the question of structure and function comes to the front. Are the insane what they are because of profound

changes in the glandular make-up of the individual, or because of past experience and mistraining? I do not see why this must be an "either-or" question. Changes in physiological, glandular and organic structure and function there may, perhaps must, be; but to say this is not to solve the question of insanity nor to make clear the whole causation or the whole technique of cure or amelioration. Two individuals with the same glandular disabilities, with the same malfunctioning of the body in part and in whole, may yet present vastly different psychological pictures. Some authorities claim, for example, that the dementia præcox group show typical defects in the gonads, and that the paranoia group show changes in the pituitary. Whether this is so or not, and it is disputed as keenly as it is urged, it is none the less also true that each individual case of dementia præcox or paranoia, while having resemblances to others of the same type, will also show individual peculiarities of delusion, illusion, thought-sequence, behavior and mood.

It is probably true that the normal human has approximately normally functioning glands, as well as a normally balanced and in-

tegrated organism. We have seen that some types of feeblemindedness are associated with glandular defects, but in every case the defective individual will present, just as does the normal individual, personal peculiarities and evidences of a real personality. So with the insane. Whatever weight we may give to his physiological disabilities, we must also see that the psychological peculiarities and disabilities developed on that defective physical basis also need an explanation, and that explanation is psychological, in that they are to be made clear in terms of past experience, emotional conditioning, experience in the broadest sense of the term. The insane are possessed of much the same background of experience, distorted if you will, but still compounded and integrated of memories, emotions, habits, purposes, wishes, desires and all that we normals have. The difference lies in that the normal group has adjusted all these things to the demands of the environment, however imperfectly, whereas the so-called insane are so out of touch with reality that they can no longer adequately function in society. So, merely to restore the physiological integrity of the insane, to merely balance unbalanced glandular

activity, would still leave untouched and unsolved the origin of their peculiar beliefs, delusions, illusions and habits and mannerisms. Once more it is clear that many sciences must each contribute their bit to the understanding of human nature, to its control, and to its betterment.

There are, then, as has been indicated, various types of major mental-emotional misconduct, or abnormalities of conduct which, since they justify seclusion and restraint, are grouped under the one title. Dementia præcox, paranoia, the various maniac-depressive types, the insanities connected with drugs and alcohol, paresis, the senile and presenile insanities and epilepsy roughly cover the range, always remembering that many of them shade into one another and that they all have some characteristics in common. Dementia præcox is so named because it is a de-mentia, *i.e.* an abnormality which occurs early in life. It is often called the insanity of adolescence, in that it frequently occurs during or near the period of sexual maturing. It has many varieties, shading, at one end, into paranoia, at the other into a condition so closely resembling feeblemindedness that mistakes in diagnosis

are easy to make. Perhaps the most prominent, distinguishing sign of this condition, particularly to the layman, is the apathy, the moody introspection, the antisocial attitude, the inertia, sometimes so strong that it amounts to stupor, the progressive faultiness of common sense and objective, sane judgment, the failing of memory particularly as the apathy grows, poor association, sometimes hallucinations particularly of sight and hearing. I remember one young girl who would sit for an hour and retail what various persons, not actually present, were saying to her. To her they seemed to be speaking in person, and were visible and audible in what seemed to her a normal manner. This is perhaps explicable on the basis that, in dementia præcox of the paranoid type, which she exemplified, there is a tendency to objectify, *i.e.* to think of as out in the real world what is actually merely subjective, the product of one's own thought and consciousness. We, who are normal, recognize our feelings, our thoughts and memories, our conscience, as what they are, and the outside world as what it is. The dementia præcox confuses the former and ejects it, perhaps because, psychologically speaking, he is un-

willing to acknowledge the thoughts as his. Often they are very sordid, very immoral, very disgusting, and the ego or what remains of the better part of it cannot acknowledge them as its own, hence they are represented as being the product of some other personality, in a word, dissociated.

In paranoia, on the other hand, on the whole an insanity of post-adolescence, there is less loss of what people would call, popularly, intelligence and ability to adjust. In fact, the typical paranoiac will often persuade people that he has a far better insight into affairs than the listener, that he has superability in logic, intuition, and creative ability. To be sure, the premises and the conclusions of the paranoiac, in those matters which enter into his psychosis, are wrong, but one would seldom know it merely from listening to him explain and expound. The beliefs of the paranoiac are so removed from reality and due so much to the individual's own fantasies that they constitute real illusions and become systematized and coördinated until the individual's whole outlook on the world is false. Thus, among other types, is the hypochondriacal paranoiac who suspects the world in general

and a group of people in particular of trying in this way or that to ruin his health, cause him to get various diseases, even to poison his food, destroy his sense organs, waste his energy, and so on. Another type works, in the most fantastic and impossibly unscientific way, for the salvation of the world, or the establishment of a new religion. Others are persuaded they are great inventors, machines for perpetual motion being the most frequent product of their strange and perverted thinking and fantasying. Still another type is the erotic, in which the patient thinks, falsely of course, that rich and important people are wildly in love with him and are begging him to marry, but enemies interfere.

The maniac-depressive type, as its name implies, is a psychosis of ups and downs; the maniac or high-tension phase of elation and a sense of well-being following a period of depression, anxiety and gloom, in turn followed by another elated period. Several varieties of this exist, at times difficult to distinguish from episodes and conditions of the types already discussed. The paretic, the senile, and the drug-alcohol psychoses present, each, their particular picture, but enough has been said to

show that there are definite types of mental-emotional disability in which, whatever the changes in organic structure, there are certainly grave changes in outward behavior. Yet all these diseases have definite causes, can be prevented in some measure at least, and in many instances can be cured. This curative attitude toward the insanities is a particularly new and modern point of view, for the older attitude was fear plus punishment and any remedial measures were purely primitive and magical. The newer technique which endeavors to lay down a process of cure, theoretic for the severer forms of mental disability or psychoses, and practical for the less severe or neuroses, is called psychoanalysis. It is to be remembered, naturally, that what we have said above concerning the physical disabilities of the insane, still applies. Psychoanalysis is the psychological attack on the problem of insanity, and only in so far as necessary medical and physiological treatment is also forthcoming, will the psychological approach have any significance or results. Psychoanalysis is no cure-all, but a technique that gives insight into the cause, the treatment and the possible

cure, all on a psychological plane, of those disabilities which we call the insanities.

Psychoanalysis is at once unduly praised and unfairly condemned. It is the subject of glowing newspaper fairy tales and the subject of bitter pulpit denunciations. It is a topic of dubious polite conversation at social gatherings and at once praised for every cure and blamed for every failure. Actually it is a rather intricate system of psychological examination, plus a certain technique of cure and reëducation. As in other portions of the strictly contemporaneous field of research and practice, there are differences of opinion even among the experts, the so-called schools of Freud, Jung, and Adler are instances. As we have found in other matters, however, there is a solid bulk of common ground which will be our main concern. In the first place, psychoanalysis emphasizes many of the undoubtedly true and well-substantiated facts of the field of normal psychology. Determinism, that basic belief that says that every act of every human being is a necessary result of all the stimuli in the momentary situation plus all the heredity and all the experiences that have gone in between, is one emphatic basis of psy-

choanalysis. Without determinism there is no cure possible, for unless certain facts are due to certain other facts we cannot reduce the past to order and we cannot arrange the future to suit the needs of the individual. Psychoanalysis aims at the substitution of good habits for bad ones, but habits are determined by heredity and experience. Psychoanalysis, again, insists on the relative importance of emotion and places intelligence in its proper place, as the tool whereby we achieve or attempt to achieve what our impulses, instincts, and desires impel us to seek. Psychoanalysis also insists on the importance of the early and formative years of life and points out that what we like and dislike, seek and avoid, hate and fear, are the mature exhibitions of habits laid down very early in life. That is, as we have seen in the case of the neurotic, and as is also true in the case of the more serious mental afflictions, it is the repressed early experiences, seeking symbolic utterance, striving for their very life to find exercise, however vicariously, that constitutes the problem of these people, ruled as they are by fear of social disapproval and the like.

The technique of psychoanalysis is a tech-

nique of remembering and reëducating. What the neurotic does not remember, or what he "remembers" falsely or partially, is what bothers him. Ask him why he is sad, why depressed, and he will give a quite sincere but very frequently a quite erroneous answer. When he cannot remember the origin of his difficulties it is often because he will not remember. There is forceful forgetfulness as well as involuntary. Psychoanalysis aims at making the adjustment real, substantial, balanced, instead of mystic, fantastic, compensatory. Psychoanalysis is pragmatic; it judges by results, concrete human results, qualitative, and quantitative. Is the last state better than the first? And who can tell but the man who has lived in the world of make-believe, of compensation, of dodging, of evasion, of neuroticism, and then comes out of himself to labor and to win results in the objective world of men and nature? Psychoanalysis need not base its claims on a theoretical perfection of argument; hypotheses are always, whether in social science or in physical science, the world of human nature, or that of external nature, worth what they bring in results. I would recall here that psychology, and therefore psychoanalysis as

a branch of applied psychology, is a point of view, a way of interpreting the facts and conditions of life, and in so far as its interpretation is correct, we both understand human nature better and can do more to better and control it.

Let us take a concrete case for analysis, and follow it through in its main outlines. I will generalize from several instances and give naturally, only main traits and characteristics. A man, some twenty odd years old, overstudious, no brothers or sisters, parents dead, not particularly socialized, with few friends and almost none of the opposite sex, with tremendously high ideals, becomes strange in his conduct. He alternates periods of tremendously hard work with periods of absolute inertia. He forms violent likes and dislikes for things and people without adequate basis of acquaintanceship or comparison. He becomes extremely religious in a highly emotional way. He forms sentimental and romantic attachments for younger boys, and shows all the symptoms of love, envy, and jealousy toward them, verging on physical endearments. He suffers badly from indigestion and constipation and insomnia. His sexual ideas are

all mixed up. He fears insanity. He threatens suicide, attempts it several times but is frustrated by older friends. He depreciates all human relationships and begins to show ideas of persecution, ideas of grandeur. He will save the world, and show people how to rise above materialistic matters. He falls down on his knees in the street, as if compelled to pray to God. He peeps in the windows of his neighbors at night. He reads vile literature and then writes essays of condemnation on the subject. He exercises to the point of exhaustion and then diets to such an extreme that in his endeavor to be " spiritual " he almost ruins his health. For periods he bathes several times a day; then for periods he bathes not at all. He can stand only association with males younger than himself and females much older. With the former he is, as said, affectionate and loving; with the latter he acts as a dutiful son with romantic decorations. He suffers from terrific nightmares, the substance of which he cannot recall when he awakens in fear and trembling He begins to weave all these eccentricities, to use a gentle term, into systematic thought and a way of life and living.

About this time. without his awareness,

though that was not a necessary aspect of the situation, he came in contact with a psychologist who saw in him possibilities of development and socal usefulness could he be made to react normally and cease to live in a world so utterly distorted. The process of analysis began and, taking a normal course, ended in a complete revaluation of things and people, and a social and biological readjustment that was little short of a complete reformation. The same original nature, the same talents, the same possibilities of growth remained, but they were freed from the factors of repression and distortion that had been occasioned by early training and experience. The first factor in this analysis was the establishment of what is technically called "transference." This has several overlapping meanings; it may indicate that the subject or patient consciously or unconsciously comes to feel an emotional attachment for the analyst, that he trusts him, projects on him his desires, sees in him a rock of salvation. It is nothing at all mystical; it is very natural, and in real life would simply be called friendship. It may go further, particularly when the sex of the patient and analyst is opposite, and it may result in so great an

attachment that the maintenance of a purely professional attitude becomes difficult. It may, too, become negative, so that the analyst comes to be blamed for the patient's difficulties and finally seems a chief enemy. Naturally, under such conditions, as also when too much affection exists, the analysis cannot proceed. The point remains that without this more or less emotional rapport of the right kind and degree, analysis is not possible. This has been made the subject of criticism on many hands, critics pointing out that the physician, in the ordinary sense, needs no such transference, but just administers his medicine and the cure follows. Apart from the fact that this is not so, as any honest physician will acknowledge, and that the attitude of patient toward adviser whether in law, religion, or medicine is always important, it is further true that in the realm of the emotions and the mind, which is the field of psychoanalysis, the situation is very different from that existing in the case of a fever, or a physical injury, when the patient's emotions and mental attitude are not the chief consideration or even a factor at all except very indirectly.

The second consideration in an analysis is

to reëstablish a more complete memory parallel with the development of the transfer and the establishment of confidence and kindly trust. Memory, as we have seen in our survey of the normal field, is faulty in all of us, though only to a pathological degree in the case of the class we are considering, where it is just that faulty and incorrect memory which is part of the trouble. Several devices are used, or possible to use; hypnotism, which is greatly in disfavor, free association, controlled association, dream analysis, biographical sketches. The purpose of all these is to enable the patient to recall, under the test conditions, things he has deliberately or otherwise forgotten and which, as we have explained it, are no longer so connected with the thoughts of everyday life that they can be normally recalled and considered. Let us consider first the association tests, controlled and free. In the one type a list of one-hundred chosen, simple, everyday words is given in a long column, either printed or orally. These words are, as we have said, simple, such as home, friend, love, self, death, sin, man, woman, sleep, and the like. They are mostly monosyllables, Anglo-Saxon, perfectly clear, but not chosen exactly at random, as would

be apparent were one to reflect on them. They are words, as is evident, on which considerable emotional discharge takes place, or with reference to which there is repression, *i.e.*, where complexes exist.

The patient is told to respond with the very first word which comes to mind when he sees or hears each of the stimulus words, presented at appropriate intervals one at a time. The fact that he must give the very first word, or phrase or grunt or nonsense syllable, no matter how absurd it seems, is emphasized. Still further, the time for each response is taken by the analyst or, in some cases, the time merely of those words on which there is hesitation or delay. To some of the words the patient will say, " I can think of nothing." If the test is in writing, the patient is instructed in such cases to just skip the " hard " word and go on. Sometimes the stimulus word is repeated, sometimes a former response is repeated, sometimes a word is given over and over again. Thus, in one case, a boy of sixteen whose affections had been tampered with by an older man, and whose parents wished him straightened out, responded twenty-four times in the list of one-hundred words with the single response "man."

It is then the task of the analyst, in which he succeeds in proportion to his experience, insight and understanding plus his ingenuity, to trace out some of the emotional patterns represented by these responses, for they represent past emotional and habitual conditionings. Standards exist whereby the abnormalities and anomalies may be picked out. In other words, the more normal the person is with reference to the object named by any given word, the more likely he will be to respond with a perfectly standardized word. Thus, if the stimulus is "table," normal responses would be "chair," "writing," "desk," and words of that nature. If, however, we get such a response as "dark-hurt-no-there-once-under," and so on, there is a personal and emotional, rather than an impersonal and objective significance to the word. Where there is emotional conditioning with reference to tables or associated objects, we will get such a response; where the object is neutral we will get standardized, purely language-habit responses. It is possible to correlate the personal, emotional, complex-indicating non-standardized responses and sketch a picture, in part at least, of the emotional disabilities and handicaps of the subject

in general. Thus, in one instance, the responses of a young business man showed complexes in religion and love, and a few questions brought out the fact that he was in love with a person of a different faith and had a conflict in that situation. But why the association test? Would not such an individual know only too well the difficulties and gladly express them without all the fuss involved with associations? Not necesarily. In fact, it is the tendency for the individual, when nervous, to blame the nervousness on almost anything but the right thing. Exceptions exist of course, and then we speak of what is technically called "insight," but it does not always exist. Still further, such problems are often deliberately or unconsciously kept out of the conscious stream of thought and the associations catch the ego, as it were, off guard. Still further, such an association test gives the analyst a better chance of sensible questioning, saving the blind groping that might otherwise be necessary without such a lead. And, naturally, the association test gives details and confirms general situations, so that in no case is it a waste of time, and in many cases one of the only possible

means of entry into the emotional world of the consultant.

The free association is another chapter of the same story. In this case we start the patient off with some word, perhaps one missed or too emotionally reacted to in the other test, or some word occurring frequently in dreams, and tell him rapidly to write or pronounce in succession some fifty words that come automatically to mind. Thus, starting say with " garden," we may get something like the following: " Flowers-shrubs-vegetables-bed-night-love-yesterday-wrong-sin—" It is clear in which direction the thoughts of the patient are going, and again, while it seems that such apparently artificial means should not be necessary, as a matter of fact they are invaluable. In some cases, where there has been long-continued, rather successful repression, almost any word when thus used as a start for free association winds up after all sorts of twists and turns in a definite situation, the key to the neurosis.

Hypnotism is no longer used in any but extremely exceptional cases. For, when all is said and done, hypnotism is a patch and accomplishes nothing but a temporary allevia-

tion of some difficulty or forces a shift of tactics on the part of the consultant. Thus, suppose, for example, a boy or girl in the teens, has the habit of biting the nails, badly, continuously. In the first place, it is wrong to say that the nail-biting habit is the neurosis or the real difficulty. It is merely symptomatic in exactly the same way that a cough is symptomatic of a disturbance in throat or lungs. To treat the cough, to dope the surfaces with some soothing syrup may "cure" the cough in the sense that the patient will not cough any more or so much. But such treatment will not cure the real difficulty, that is, the infection involved as a basis for the cough. It may result in its getting worse. So with hypnotism, to hypnotize the adolescent with the habit of nail-biting may temporarily, if the right suggestions are given the patient in this state, result in the stopping of the habit. But the habit is often symptomatic of an unsettled emotional condition, is probably a symbolic act for the expression of something else, perhaps fear. If that particular act of expression is hypnotically forbidden, the expression may work out in some other form, perhaps stuttering. The correct procedure is again analysis to find the hid-

den complexes and repressions and to bring about proper conscious adjustment.

Still further, there is the biographical approach. The patient is told to take a sheet of paper for each year of his life, and to note on it the main events of that year, constantly checking back and forth and entering new recollections. Particular attention is to be paid to emotional experiences and to the names and recollections of relatives, friends, chums and servants. Record is made of frights, punishments, initiations, religious experiences, sex experiences, including false beliefs as to birth, the differences of the sexes as conceived in early years, the experience during adolescence, and so on. This, of course, can be followed up with still further questioning, with association tests of both kinds, and with efforts to fill in the gaps of the record, a surprisingly easy thing to do when the record is once begun. It is literally astonishing how much a subject will remember of a given year after he has handed in what he at first calls a complete record of all he can remember, once the questioning and associations start. Blanks become crowded with details, all sorts of spontaneous recollections occur, dreams become enriched,

and a more or less complete picture of the past years finally emerges.

Of course, no analysis is complete; none needs be. The aim is practical, concrete, pragmatic. The analysis aims at enabling the subject to meet the environment on decent terms, and much can be omitted and yet this be the result. A complete analysis, theoretically, would perhaps take as much time as the individual did in acquiring the experiences being analyzed, and is therefore impossible. If the analysis removes the barriers to good adjustment and frees the individual from repressions, the results cannot well be held only partial. From this point of view, we all theoretically need some analysis, at least now and then, even if we are on the whole fairly well orientated and adjusted and not indulging in too much fantasy and compensation, for though the near-normal tend automatically to straighten out whatever small kinks some particular experience produces, the process can be hastened and made more complete by aid.

Let us go a step further in our examination of the terms and technique of analysis before we return to our imaginary individual. What is the result of recollecting, consciously, for-

gotten and repressed material, experiences, and complexes? What is gained by becoming normally conscious of that which has been crowded out of the ordinary sweep of thought and feelings? What Freud calls "ab-reaction" takes place, a phenomena incidentally allied to Aristotle's theory of the function of art and the tragic drama, but in a different setting. Thus, what the individual has been unable to assimilate, what he has, for one reason or another, repressed, was experienced at a given age. Since the time of repression or the psychological fear or trauma, the individual has grown up, matured in every direction except as regards the repressed material. Now, if at a mature age he can recall, relive, rejudge, reassociate, revalue the old experience, and also allow the pent-up emotions to express themselves in connection with the memories involved, the stage is set for the catharsis or purging. All this language which I have tried to keep consonant with Freud is nonbehavioristic, somewhat figurative, but it will be clear that what takes place is simply that the old repressed emotions and habits express themselves in terms of a new attitude. The experience is, so far as possible, relived, but the in-

dividual is now mature, has been given some insight, is ready to change, and can and does revalue, resolve and reassociate. I say ready to change, for there is no question that while theoretically catharsis should free the individual, as a matter of fact it tends to leave him in a rather neutral mood, or even not neutral but with a tendency to sink back into the old repression. Hence, and it is a point most analysts have not sufficiently emphasized, appropriate opportunities must be given for the formation of new and satisfactory habits to take the place of the old ones now made conscious and ready to be discarded. Practice is necessary in all things, and particularly is this true where the individual has broken former bad habits into which it is all too easy to relapse.

Let us come back to our imaginary individual, whose case we presented in outline some few pages back and who has begun his analysis. What are the outstanding traits of the maladjusted individual in question, and what will the associations bring forth? Some examples from the latter will be illuminating. Thus, to the word " sex " inserted in the controlled list of words for association (frequently

special words are inserted for special purposes) he responds " dirt "; later on, when allowed to run off a string of free associations starting with the same stimulus, he responds, " rot-alley-dark-help-god-god-god—"and then stares wildly at the analyst. To " home " he responds, first, " none " and then, when continuing, runs thus, " hate-bad-punishment-false-rough-dog—" then a pause, and " mother-mother " again stopping and staring. The other associations, both controlled and free, clearly indicate, and proper subsequent questioning and dream analysis support, the conclusion that his whole attitude is a composite picture of his rebellion from two things: the tyranny of his father and the too sentimental love of his mother who, herself also neurotic, has fastened her love on her son instead of the stern father who will have none of it. All the rest, the religious conflict and the sexual, are but reflections and transformations of the one problem of the home.

Thus, he is at one and the same time drawn toward the father and alienated. His religious attitude is the same; he craves for the love of the Heavenly Father in quite a worldly and human way; he also distrusts God and

fears him. Sex is to him as double-faced, for without going into details it is sufficient to say that what he has seen and heard, what he knows of other boys and men and girls, at once attracts and disgusts. This is that strange and important attitude of "ambivalence," illustrated by the so-called joke about the farmer who was questioned by his neighbor as to where he was going and who responded, "I'm going to town to get drunk, and gosh how I dread it." By original nature we are, say, prone to desire and seek a given activity; by training we are taught to avoid it. This, or the reverse, when carried sufficiently far, may result in so evenly balanced a state of attraction and aversion that the act or thing is at once good and yet bad, desired yet feared, sought after yet avoided. It is a common attitude and always speaks for analysis, however slight, to settle the stress.

His dreams, as we have said, represent the same conflicts, the age-old conflict between the young and the old, the father and the son, self and authority, magnified in this case simply because nature had formed a more sensitive organism and experience had magnified the bitterness and the dissatisfaction of life. On

a large scale, and deserving the adjective neurotic, it but represents what we all go through. It has been said that only the utterly stupid have been immune from thoughts of suicide, from desires to revolt against parents, from doubts of the actual blood relationship of the supposed father and mother, from religious and sex conflicts. In this case it was merely a more pronounced effect for the reasons stated. It is clear, also, that while sex is involved in the situation, the neurosis cannot be called just a sexual neurosis. This is constantly misunderstood; it is fair to say that sex is always or nearly always one of the factors in cases of mental and emotional maladjustment and disability other than those of pure feeblemindedness or of congenital origin. It is clear, too, that the conflict was mainly an emotional one, not purely rational, which is natural in view of the relationship of drive and mechanism which we sketched in our discussion of the normal. It was not that the boy lacked intelligence, but that his intelligence was given a task beyond the ability of that intelligence in the condition of its training. It needed outside aid, and while that aid happened to take the form of a psychological analysis, it might

easily have been several other things: an abiding friendship with an older person, a task that took all the interest and energy of the individual, a love affair, a whole-hearted religious conversion, and so on, but the chances are that in so far as any of these things would have succeeded it would have been because they, as agencies, did more or less what the analysis did.

His final status was partly the cause and partly the result of a new social adjustment and a new environment. He left home, undertook self-supporting work, studied, mixed with others, read widely on the subjects of sex and religion, became self-respecting, able to openly and consciously examine his conflicts, became interested in those of other people, improved his physical condition which, while not deserving any particular medical diagnosis of ill health, was none the less verging on that state, learned to use his body and his mind as one does powerful but delicate tools; in a word, became extraverted, normal, creative, balanced, and then found as a by-product that happiness for which he had vainly striven directly and crudely. His problems were, in a sense, of his own making; his point of view was abnor-

mal because of training and conditioning and there was no living in a world such as we have to live in with the particular maladjustment he had built up. It had to change for better or worse, not that the worst would necessarily lead to anything more serious except to himself, for it is always the neurotic himself who gets the worst of his own nature.

Much has been made, both in the public press and in the more popular interpretations and applications of Freudianism, of what is called "sublimation." We are advised to sublimate our lower natures, sublimate our ego, sublimate, in particular, sex, through art and religion. There is certainly an immense amount of misunderstanding in all this. In the first place, it should be quite clear that one act is never another. To do this is not, in any sense, the same as doing that. If, for example, we are hungry in a physical sense of needing food, but wish also to satisfy another need, say, to smoke, or to feed some other individual more needy than we are, and have but enough money to do one of the three, we cannot be said to satisfy the physical hunger either by smoking or by being charitable to the still more hungry man. If we feel the biological need to have

children of our own, it is evidently only figurative to say that we satisfy that need by dogs, cats or even by adopting a child or two. We may do or get something good and satisfying, but not what the particular need calls for.

If, when we speak of sublimation, we mean that common sense, or the limits of our powers, or the conflict of several of our needs, leads to a compromise, to taking something less than what we really want, or something somewhat like it, there need be no quarrel; but this is clearly substitution, and should be understood as such, for it is not satisfying the original desire to satisfy another desire. It may be, and indeed often is, better to satisfy some other need than the immediately pressing one, but this should be clearly understood as a choice, based on training and circumstances, past and present, and in no sense as a roundabout way of satisfying the original desire. We cannot satisfy sex by raising flowers or by joining the Red Cross, or doing social work; we cannot satisfy a need for companionship by indulging in an orgy of spending while still remaining alone.

Another interpretation of sublimation as it is sometimes understood or rather misunder-

stood, is that of conditioning. If we wish to be poetic, this might be called sublime-ation. For example, my dog loves caramels, and crouches and whines every time I eat them in his presence. Say that I refuse to give him any unless he rolls over, sits up and says "Woof" three times. This merely means that I make him earn them by first performing his act, but since he gets them in the end it is not sublimation at all, even in the popular understanding which, as we have shown, is false anyway.

The real, and the sensible solution of problems where sublimation has been vaguely invoked is through the same process of analysis which we have sketched and the conscious realization that it is not, for the moment anyway, within one's power to have, or be or do what one desires, and that one must act courageously, sensibly, and consciously to control one's desires, to await the opportune moment and, in the meantime, to do and be and have all that is legitimate and obtainable in other ways. Life, at best, as we now live it, is a compromise and a bargaining, and if we live with our eyes open and with complete self-consciousness of the right sort, even self-control and self-denial will have their charm

and value, since they are the expression of the full self and not imposed by force from without.

We used the word, extraverted, above. It contains the clue to the point of view of the neurotic as compared with the normal. In many things we are all extraverted; in some things we are all introverted. Some of us are introverted in most things, and so on. Extraversion is that habit of living outside one's self, of being a realist, of being interested in things, in being non-self-conscious in any morbid sense, while, naturally, the introvert is the reverse of all this, with the emphasis on introspection, self-observation, inward-looking and inward-weighing habits. The extravert likes things, the introvert their effect on him. Naturally, the two are really talking about the same thing, but the centre of reference is different, poles apart, in the two cases. The neurotic tends to be introverted, the extravert is more likely to be normal. Of course, there are some qualifications to be made, but the distinction is a real one, however relative it may be in degree. In matters that we get from early training we are apt to be introverted; in matters of business and science, we are more likely to be extra-

verted. Particularly where ambivalent emotions are involved are we unable or unlikely to be extraverted; the emotional problems of others we view in terms of fact and reality, but when our own emotions carry us away we see only the inner urge and cannot weigh, objectively, the facts. The whole theory of types, and their physical traits, is founded on this major difference of point of view, *i.e.* whether inward or outward looking.

The general background of technical and concrete explanation given above is also the explanation of many minor and occasional eccentricities of the normal individual. Slips of speech, forgetfulness, mannerisms, posture, one and all and many more such behavior elements are to be explained not merely in terms of conscious endeavor and clear awareness, but partially in terms of unconscious, repressed or partially repressed impulses, conditionings and needs. Thus, on the whole, the best of us are likely naïvely to forget and omit to do things which are really uncongenial and against which we feel a strong aversion. Again, when we have, to all outward and conscious appearances, come to a decision to do thus and so, *i.e.* some really uncongenial task, say, we may

find the time for the doing slipping by with no action. We can and do write, seal and stamp a so-called important letter which contains something which goes "against our grain," and determine to mail it on going out, only to return and find it still awaiting action, or still worse, permanently "mislaid." We can and do forget to attend to commissions which involve disagreeable contacts; we can and do forget the names of people and places which, either in themselves or indirectly through associations, are unpleasant. We can and do show nervousness and indecision in mannerisms, facial expression, voice tone, and posture. Thus, an individual may concentrate on attaining a masterful voice and tone, when meeting a superior, only to give away his underlying fear and sense of inferiority by facial expression, movements of hands, and postures of head and body. All that we do, and that means both consciously and unconsciously, is a sign of what the organism as a whole is feeling, thinking on the situation as a whole, both in its immediate sense and in the sense of past experiences roused by association. Not all of this need be considered pathological in the strict sense; some of it may be

due to fatigue, to the usurpations of an important problem, to impatience, to boredom and so on, but the explanation lies, just the same, beneath the surface, and not in the immediate contents of the consciousness of the moment.

In particular the phenomena of art, religion, the crowd, choice of a vocation, and testing of abilities in general, involve a consideration of the aspects of life and personality which loom so large and take so pathological a form in the case of the neurotic and psychotic. These matters have, also, a general aspect, in that while we are not all neurotic, we are all interested in art, inclined, at times at least, to be specially religious or anti-religious (much the same thing), and we are all subject to the influence of the crowd, and all follow some profession or vocation. The next section, then, will consider these things.

V

SOME WIDER APPLICATIONS

Let us begin with the realm of the æsthetic, *i.e.* with the things we call art and beauty. We are constantly using the term beautiful, but if a group of people are asked to stand and give their reasons why they declare this picture and that statue, this woman, girl, or man, beautiful they will ordinarily be at a loss, and flounder around in just words, words, words. The recent choice of Miss America at Atlantic City brought forth some objections; the judges declared she was beautiful; outside critics here and there denied it. Why? Is beauty so indefinite, so personal, so much dependent on elusive and temporary factors that there really is no such thing?

One can try this experiment which the writer does yearly in classes. Place before a group of people some dozen pictures, more or less of the same subject, say nude female figures in various positions, with various types of physical formation, differing faces and expres-

sions, of different ages. Ask the group to rate them in the order of their beauty, placing opposite the best and the worst their reasons for so judging them. Then take a vote of the class, and begin to listen to the reasons. Bedlam reigns! All sorts of reasons are given that, on examination, turn out to be purely fictitious rationalizations, not reasons in the basic sense of reasons at all. Nonsense about line and shadow, avoidances of the issue by bringing in other words to define the elusive term beauty, which words themselves remain undefined, constitute most of the answers.

Finally, after much futile discussion some one hits on the idea that what each individual considers beautiful depends on the experiences which that individual has had, and light immediately breaks on the problem. Beauty is in the eye of the beholder, and in his ear, too, and while we do not ordinarily speak of beauty of taste or smell or touch, what corresponds to beauty in these instances is also in the organism, is the reaction, emotional and otherwise, of the individual, of all that has gone to make up his personality, his likes and dislikes. We speak of a beautiful picture, statue, scene, person, because the sight, through the sense organs

plus the associated memories and remembered experiences is, on the whole, more or less pleasurable. We speak of beautiful tone quality, tone sequence, music, for the same reasons, though the organ of perception is the ear. We do not speak of beautiful soup, however fine it may taste, though we can and do use the word beauty indirectly and figuratively in saying that things are beautifully made, composed, seasoned, and the like, though we also tend to feel that this is stretching the use of the word. A race or group who received their maximum and most frequent sense-pleasure feelings through tongue and nose and whose eyes and ears were relatively inactive might reserve the word "beauty" for the experiences received through the organs that gave them most. Note, however, another side to the question; when we pronounce a picture or a scene beautiful we do not consciously become aware of the sensation as a sensation, but merely of the pleasure, and by a process of projection we tend to locate the pleasure in the object. We know, if we reflect, that the pleasure is in us, is an organic condition; but we associate the pleasure with the thing in question and tend to locate it there. Thus we

say, "Is she not beautiful?" rather than, "Does she not give me a sensation of pleasure to look at her?" This is merely a linguistic custom and needs no criticism or change, so long as we realize that the thing, itself, is not beautiful, but that our reaction to it gives rise to that condition of pleasure and satisfaction of the organism which we project and call beauty in the object.

Beauty, then, is an individual reaction; concerning taste, the old adage has it, there is no disputing, and this applies to beauty. We may agree or disagree with the pronouncements of some one else, but if he sincerely calls an object or person beautiful, it is his privilege thus to react, for it is a reflection of his nature and nurture. To be sure, some pronouncements of beauty are pathological, but this merely means that the individual is abnormal, neurotic, repressed in experience, too biased in one or another direction. It means also in cases of extreme abnormality in the judgment of beauty, that the individual is more or less out of touch with the group and the group life, for with all due allowance for individual æsthetic reactions, those of a given

people, in a given locality and time, do have a certain rough congruence.

It is quite apparent, then, that beauty is not a matter of intelligence. It is a question of sensation in the light of past experiences and habits, plus the associated emotions. An interesting example frequently occurs; on the Terman test of intelligence and the measuring of the I.Q., a page of outline drawings of various faces are given. One or two are hopelessly ugly by sophisticated mature standards, one or two conventionally pretty. Often a child will choose, as the most beautiful, one of the ugly faces. This is in no sense a sign of lack of intelligence but, on the contrary, a sign of strong fixation and conditioning toward a certain type. Perhaps the picture is reminiscent to the child of the mother or some kindly nurse or relative and therefore represents a natural and normal reaction on the part of the child. We all tend to think of those who treat us kindly, particularly when we are young, as beautiful and those who treat us harshly as ugly. The mother thinks her homely child quite as beautiful as the fairy queen's child. Thus, as is apparent, one's drives, needs, de-

sires and the like are at the bottom of the experiences of beauty.

But art and beauty are not the same. The beautiful object rouses emotions in us that are due to our own nature and that are largely personal with us. While we may agree that in matters of beauty and taste there is no disputing, in matters of art there are standards that cannot be gainsaid. Thus, roughly speaking, art is to the group what beauty is to the individual. Art is that object which is so congruent to the nature and nurture of a large number of people that it rouses in each much the same emotion, leads to much the same reactions, accomplishes much the same changes in organic and psychological ways. The individual may never have considered whether the national song of his country is or is not beautiful, but in so far as it rouses emotions of patriotism, glad memories of home and fatherland, and in so far as it does much the same thing for others, it is emphatically art, whether it be beautiful or not. Art is social; it is the language of the emotions. Art conveys from one to the other, through large groups, feelings and emotions, where language tends to convey ideas.

Art, since it embodies emotions and reactions congruent to a large group of people, therefore has its different periods and differing channels and aspects, but instead of depending, as in beauty, on the individual experience of the person as such, it depends on the rather definitely instilled social conditionings natural to any culture and more or less common to all members of the group. It is not for foolish or inconsequential reasons that the art of the Greeks was so emphatically materialistic and so biologically solid; nor for any less good reasons was the art of the Middle Ages spiritual and tending toward other-worldly things. For while beauty may be colored with religious ideas, it is much more likely that art will be. Art embodies the ideals of a group, as beauty embodies the personal preferences. Both are a matter of nurture, of course, but it is that aspect of nurture which is personal to the individual which produces the one, whereas it is the elements of emotional conditioning common to all, interwoven with the ideals, social, religious, national, ethical, racial, which produces the other. Each grows through the other; each feeds the other; each may be, at times, in conflict with the other.

Art outlasts the individual and his generation and precedes him; he finds it there, and while the great artist may do for the crowd what the individual does for himself in objectification in the realm of beauty, the artist is, of course, the product of his time. The creation of beauty is limited only by the nature and nurture of the individual; we all create beauty, even the child with his drawings which the foolish adults tend to ridicule; but we cannot all create art for we are not all in the grip and permeated with the spirit of the time and the group.

Let us look a bit further at the action of art which we have so far expressed as that type of stimulus which, for a group of people, rouses a rather definite set of emotional reactions, releases common drives tending to common action. Art offers opportunity for the enjoyment of that which cannot be enjoyed at first hand, because of repression or taboo or physical or temporal limitations. In the realm of art we live the life we would live were we powerful, able, free, unrepressed. In the realm of art we do what we long to do, but cannot, dare not, may not. In art we live the life of our dreams and hopes, our ideals and

our frustrations. Particularly is this true in literature, a division of the general realm of art.

Art makes life easier for us just because it offers us paliatives for the drabness of that life. In the perfect life, art would be merely memorial, or stimulating, not compensating. Such life may never be, for all history shows that the more humanity gets the more it wants. The pot of gold at the rainbow's end is no mere myth or folk tale. It is the story of every human being's effort for more life and better life. In proportion as life languishes, art flourishes; art and philosophy, like some other creations of man, begin when life declines. The Golden Age is an age of life, at first hand. In youth, as individuals, we seek neither art nor philosophy; as we grow and suffer we seek both whether professionally or amateurishly, for when we cannot find the real thing we inevitably take the best substitute offered. As with the individual, so with the group; when we live at first hand, we need no substitutes.

Not that this need be so; it is merely so historically. Nor is this to deny the idealizing value of art and beauty, nor yet the uplifting and energizing aspect of the thing, nor yet its power to encourage the depressed and build

up the wherewithal for a new effort. Art is at one and the same time a drug for the weak and a stimulant for the strong. What ratio each of these bears to the other depends on the other factors, institutional and so on, which are woven into the fabric of art. The dominant ideals and ideas in the social scheme become dominant in the art of the place and the period. This is particularly true of national, religious, and perhaps political and racial ideas and ideals and in our succeeding investigation of religion, we will see much the same mechanism at work.

When I say much the same mechanisms, this is not to imply that humanity is bankrupt, but only that we are each of us driven constantly and with great pressure to the end that we make a success out of life and living. Our drives urge us on, and when we do not satisfy them biologically and realistically we do so symbolically, through the intellect and through art. If we cannot do it one way and with bricks of real material, we strive to do it another way and with bricks of our own fantastic construction. Life is successful only if it justifies itself in the living. Whatever hypotheses we make as to this or an after life in another

and a better world, it is not possible to see in that any reason for making this a worse world. Life hereafter cannot, in any sane hypothesis, depend on death and disaster here. Incidentally, it is clear, historically and psychologically, that the hypotheses which have been made as to the existence and the entrance into another world, are to be understood in terms of repressions, compensations, and all the rest of the mechanisms which we have examined.

Thus, from this point of view, and remember we are speaking psychologically, religion is a way of evaluating life, of intensifying its significance, of compensating for its deficiencies, of turning its bitterness into joy, its suffering into happiness, its privations into rewards. Historically speaking, religion is a record of a certain type of behavior; philosophically speaking, religion is something to be proven or disproven. Psychology does not attempt, directly at least, to prove or disprove the truth of the statements of the various religions; though indirectly, in so far as it shows their human origin and their human use, it does go to disprove their divine origin and non-human existence.

Religion, is the product, psychologically

speaking, of an empty life, a repressed life, a bitter life. Speculation on the meaning of life inevitably results in a philosophy, at whatever level of thought and culture it takes place, and the instant such speculation begins to justify the present in terms of a hoped-for and imagined better or idealistic future that will give what the heart longs for and the situation in life denies, we have a religion. Religions may, also, take the view that there never can be aught that humans would enjoy and that the purpose of life is to teach resignation, aloofness, non-resistance, but behind even this lies the belief that by such means with or without the aid of magic or superhuman agencies, individuals may achieve a better life, a life in which, while pleasure is not increased, at least pain and struggle will be diminished.

Happiness, youth, success, a full life, never give rise to religion in this sense. "When the Devil was sick, the Devil a monk would be; when the Devil was well, the Devil a monk was he." This is age-old, profoundly true; it is in misery we seek any and every alleviation that fantasy can suggest without any particular examination of the illusoriness or reality of the facts and conditions involved. This is

not to say that all illusions are unjustified or unfruitful, or that they are illusions in any but a psychological sense in that they are beliefs not based on known facts but on fancy, hope, and desire, for it may well be that what we thus hope may have some elements of fact in it even though we have no evidence thereto. But we should seek the evidence prior to committing ourselves to belief and practice in it.

From the point of view here sketched, it is clear that modern psychology, while it would understand and even condone, at times and under certain circumstances, such gambling with reality, it would also strenuously insist that the better though more difficult answer to misery is such reformation of the self and the environment that happiness comes as a by-product of the proper inter-play of the organism and its surroundings. All thought is effort at adjustment; the practical value of intelligence is demonstrated as well in error as in truth, but we have no measure of values other than the essentially human one of the enhancing of life and its general qualitative-quantitative results. All this, as is only too evident, leads to metaphysical and purely abstract discussions far beyond the scope of our present

interest. The heretic is but a rival with a new orthodoxy and, in the end, one can judge only by the fruits of a doctrine.

The history of religion shows clearly, for each age and each people, that it is an effort to square an imagined good life with an actual not-so-good existence. Each new theology is both a philosophy of life and a sketch of the universe, a bridging of the gap between the organism and its home. In so far as such philosophies work in terms of fact, use objective methods, base results on human values of biological satisfaction and happiness, they become psychologies and ethics, and the otherworldliness fades and becomes a mere gesture. We now live here, and wherever we may someday live, our present problem is emphatically here. The hereafter must be in terms of the now, not the reverse; the so-called spiritual must be founded on the physical and not on mere words that have no significance, no relation to real facts and conditions; higher values depend on lower ones, and there is no royal road to freedom other than through health, balance, and the sanity of individual and group.

Religion, it will be answered, creates, sus-

tains and develops the higher aspirations of man. Well and good, but one may ask whether it is not possible for aspirations to so outrun possibilities or even probabilities that they can be disintegrating instead of integrating, destructive instead of creative, a surrender instead of a victory, Whatever man thinks, plans, hopes, it is man who does it. All that is, in so far as it is for us at all, is human in warp and woof. What we touch we humanize, well or badly. Man may have aspirations as high as one may well wish, provided they are of such nature as to be congruent with his potentialities. Aspirations based on potentialities are realizable; those which ignore or endeavor to transcend human nature are, at bottom, more pessimistic than the crudest materialism which endeavors to build on fact. Thought which denies the nature of thought is bankrupt. Plans for man's salvation which ignore man's nature are doomed to failure. We must, as in mundane things in the mechanical world, calculate the constants of our material, and when we build a society and a plan of life, do so in terms of the nature of the material we use—human nature. This is tautology, but so often overlooked that one wonders at the naïve child-

ishness of human hopes. Our hopes bankrupt our capital which, used wisely and with an eye on the facts, would multiply all good things for us.

Naturally, in religion as in other realms of human activity, we find the abnormal, in the sense of that which is unusual. All things are relative, and however we regard religion, we must admit that certain so-called religious experiences seemingly so contradict the usual that they need the careful attention of the expert in human nature. I refer particularly, at the moment, to trance and vision, to the claims to direct inspiration and communication or contact with God or gods, to the miracles and the miracle workers, historically and also contemporaneously speaking. The visions and hallucinations of voice and eye are, of course, all one with those who experience the same thing but do not claim for it religious significance. They are symptomatic of repressed desires and needs, emblematic of hopes and wishes; they are symbolic, self-expressive, but of unconscious origin in the sense of the term as we have discussed it. The devil that Luther saw was Luther's own devil, the externalization and concrete picturization of a part of

his own nature. Denying in himself what he was, he but the more loudly repudiated it by his dramatic experience. The seer who sees God, sees his ideals in more concrete form than does the philosopher who puts them into his scheme of a Utopia, but in so far as the philosopher sticks closer to real facts and conditions, he makes more possible the realization of his ideals through social adoptions and coöperation. To dream dreams and see visions is a personal escape; to plan a better life and teach people to live it is social progress.

If I seek through prayer to produce rain I may give the appearance of a devout believer, but I cannot produce rain. If I think objectively and devise a scheme of irrigation or method of precipitating the moisture in the air, I am no priest in the accepted sense but only a materialistic scientist, but in every essential sense I am a better priest for my people. The mere fact that men pray shows that prayer has its returns, but it is again only necessary to ask are the returns real or merely fantastic; do they enhance life or do they mean a retreat from the too-too hectic battle of life. Prayer is auto-suggestion, and in so far as the suggestions involved in such behavior

are within the realm of actual accomplishment, well and good, but when they turn to hopeless and ultra-human aims, they wear themselves out in rhetoric and gesture. There are other and more realistic methods of auto-suggestion that summon, quite as effectively, the resources of the individual. It is always worth remembering that nothing can come out of the individual that is not there to be used; suggestion remains merely suggestion unless it be directed to potentialities of the individual or the group. Always we must remember these natural and inescapable limits of human endeavor, for when we forget them we do not get the unattainable but, still worse, a minor and a distorted portion of the potentialities we have ignored. If we would but be as objective concerning ourselves as concerning our possessions! We use no magic or theology on our animals or our machines; we know their limits and work them close to them, and expect that their nature, make-up and design are the signs of their abilities and not symbols of a possible transcendence of them. In all things but the most important, namely ourselves, we are pragmatic, scientific, objective, utilitarian; with self we are mystic, transcendental, fantastic. The psychologist, alone, sees the possibilities of a

science of human affairs, a science that would build as firmly on fact as does his brother scientist who deals with rocks and stars, and which would bring a rich return of power and knowledge as a basis for a human society in which man would come into his own and be really, not merely in dream, Lord of Creation.

The phenomena of art and of religion are, as is evident, group matters. An individual could not have an art all to himself except in a very strained sense and while he might evolve, as Setebos in Browning's poem, a personal conception of a God and the proper conduct toward him with all the attendant theology, it would not be religion in the accepted sense of the word unless it were the common attitude of a group. It would be nearer to personal magic.

There are many other things and happenings which are the product of a group, either closely organized with a responsible and constantly supervising leader, or of a more loosely knit crowd with a leader *pro tem* who may, incidently, lose his leadership in the very process of leading. Again, as in art and in religion, while the individual members of the crowd may and do have some rational or semi-rational ideas and purposes, it is fair to say that

a crowd in a real sense is more likely to be characterized by an almost purely emotional movement and tempo. Drives are in full control and there is no deliberate weighing of means and mechanisms. In the crowd, as a member of a crowd, the individual's repressions and commonly unrecognized and usually unexercised desires and impulses tend to get expression on the basis, largely, that what all do is right. The real strength of a crowd is in its numbers, in the mutual support they give to one another, not in any reasoned or even in a physical sense, but in a purely emotional sense. When many are angry, it is easier for the one to be so; when many are fearful, revengful, brutal, bent on expression of race hatred or religious intolerance, it is all the easier, indeed almost inevitable, for the individuals coming into the storm centre, provided they also possess the same repressed or ordinarily unexpressed tendencies and impulses, to express them. The greater the repression, and the longer the time of such, other things being equal, the greater the drive and the greater the violence and brutality of the crowd.

We belong to many crowds; every aggregation of people with whom we have ties is, to some degree, one of our crowds. Some groups

approach to intellectual organization, but can always slip over to the emotional realm, no matter who makes up the membership, or for what purposes they are gathered. The war plainly showed that. When we join in effort with a group, we become, to some degree, subject to their natures and their nurtures, however individualistic we may ordinarily be. While all this is true, we also live by crowds, for destructive as may be their influence to the higher ideals we have laboriously constructed and set up in moments of self-communion, they can also inspire us and lead us to greater heights than we could individually achieve. The real problem of the individual with reference to his crowds, no matter how organized or for what purpose, is to use the emotional inspiration, but so to temper it with experience and the use of thought that one acts in consistency with the rest of life and does not break with it. That almost means that one does not belong to the crowd! But it is still true that thought is a tool, even to a crowd and though often more than usually subordinate to the other aspects of life and being, it does not mean that it is entirely useless even here. It is useful as a tool, conditioning, and broadening the field of stimulation at the moment, so

that we do not act on the unanalyzed impulse as it is given in any one situation but on that impulse plus what we know of its working and previous results. When all is said and done, as we all know well, it is easy to thus counsel and always very difficult to thus act. But this means constantly growing self-knowledge, a welding of each new experience, good or bad, to the old and the ones yet to come, until we do finally achieve a life that is free yet controlled, emotional and impulsive, yet creative and balanced, subject to restrictions, but those self-imposed, welcomed, enjoyed and seen as a part of the basis of growth.

We live in and through the crowd; the problem is not to gain entire freedom from them, but to learn to use what they give wisely. Psychologically and sociologically speaking there is no such thing as individual nor yet crowd; both are abstract terms which, like all such terms, tend to hide the facts, namely, that we are part of one another. Undue supremacy of the crowd voice and authority, or undue supremacy of the individual, alike spell disaster to the best in human nature. It is not that we do not need group life, but that we need a better group life, one in which the crowd itself, organized as you will, will pay

more attention to facts and less to fantasy, more attention to balanced activity and less to emotional explosion of repressions. The crowd has its complexes as the individual has, though the crowd is no organism in the sense that the individual is. The complexes of the crowd are those of the individuals who make it up, and parallel with the development of individual self-knowledge and the understanding of human nature will go a development of that group life which is part of the individual life. Social psychology which is a larger subject the study of the crowd is that branch of the whole field of psychology which concerns itself with those stimuli which take the form of another person or group of persons. The crowd brings to life nothing new; it is merely a form of stimulus to the individual. When we study what an individual does when in a crowd we are simply studying some of that individual's reactions, specializing on that type of behavior which is stimulated by the conduct and presence of other humans, but the fundamental basis of conduct, the drives and the mechanisms, the nature and the nurture, the heredity and the training, remain the same; we are still studying the science of human behavior.

Let us come back in conclusion, to our

original statement, namely, that psychology is a point of view. It is a point of view in that it organizes the facts we know concerning human nature in health and disease, when free and creative or repressed and subdued, when alone or when with others, when adjusting to conditions here and now or when adjusting to a real or fancied future.

Psychology interprets what is past in the life of the individual and the career of the race. It is a point of view in that it is a way of looking at events and facts, a way differing of course from other ways of looking at them, such as the theological, say, or the economic but, properly speaking, including, evaluating and coördinating all these others, so that, in no uncertain sense, it is the widest, deepest, and most significant of all ways of regarding the world of human beings and their affairs.

To say psychology is a point of view must not be taken to mean it is merely convenient to thus look at things. Sometimes, indeed, it seems more convenient not to see things psychologically, but such convenience is always in the service of some other and less wide point of view, some other and less satisfactory evaluation, and the inconvenience is the purely

human one of the task of reorientating one's self and building a new attitude and understanding toward life and nature.

The words " point of view " mean not that we can choose to suit the pleasure of the ego, but that by properly seeing the nature of things and of human nature, we obtain that good adjustment which leads to the by-product we variously call happiness, pleasure, contentment, bliss. All values are human values, but some values, while still human, are attained at the sacrifice of other and far greater ones. The neurotic and fanatic are examples of this, in that they gain one satisfaction while refusing many others, more solid, more lasting, more healthy and sane. Psychology as a point of view marshals the facts, coördinates the abilities and evaluates the possibilities of human nature and, using the same drives which when under the control of ignorance and superstition can lead and have led to despair, degeneracy and resignation, points out the way to the permanent and ever-increasing enhancement of human life, to the ever-widening possibilities of human achievement and to the attainment of an ever-growing power of human control over man and his environment.

BIBLIOGRAPHY

The function of a bibliography is to list books which will give additional and more detailed information on the whole field or subdivisions of it. It is unfortunate that many bibliographies are exhaustive rather than useful to the average reader. The books listed below are, all of them, readable, valuable, and will carry out the programme of this book, *i.e.* will treat psychology as a living tool, useful to man and to the solution of his various individual and social problems. They come in alphabetical order with some little comment on each.

Allport, Floyd H., *Social Psychology,* Houghton, Mifflin & Co., 1924.

From the present writer's point of view the outstanding book on this subject. Thoroughly behavioristic and scientific. None of the mysticism of the usual book on the subject.

Bleuler, Egen, *Textbook of Psychiatry,* The Macmillan Co., 1924.

The outstanding book for layman and professional alike for the classification, explanation, and history of insanity. While colored with all the work of modern writers, it is not devoted to the exploitation of any particular "ism." Case histories, careful descriptions, excellent diagnostic examples.

Bradby, M. K., *Logic of the Unconscious Mind,* The Oxford University Press, 1920.

An excellent book, along Freudian lines, on the reasoning of the mind when colored by emotion, prejudice, hope, fear and the like. Very instructive and valuable.

Dorsey, George, *Why We Behave Like Human Beings,* Harper & Bros., 1925.

A very fine detailed summary of the findings of modern science in all its branches concerning the origin, the nature, and the character of humans. Behavioristic and scientific; a veritable encyclopædia of material.

Fielding, W. J., *The Caveman Within Us,* E. P. Dutton & Co., 1922.

A very readable, popular presentation of Freudian psychology for the non-technical reader.

Freud, Sigmund, *General Introduction to Psychoanalysis,* Boni & Liveright, 1920.

Perhaps the best book of Freud to read first. Popular, but containing his whole scheme of psychology.

Frink, H. W., *Morbid Fear and Compulsions,* Moffat, Yard & Co., 1918.

A book to be read after one is familiar with the Freudian point of view. Contains one of the most detailed analyses in English.

Gesell, A., *Mental Growth of the Pre-School Child,* The Macmillan Co., 1925.

A splendid volume, illustrated, on the young child and its growth, physical and mental, during infancy.

Goddard, H. H., *Feeble-mindedness,* Henry Holt & Co., 1920.

One of the standard texts, illustrated and accompanied by heredity charts on the whole problem.

Gordon, R. G., *Personality,* Harcourt Brace & Co., 1926.

Perhaps the finest book on this elusive subject. Uses the contributions of Freud and Jung in the investigations, description and treatment of the various types of personality.

Hamilton, G. B., *Objective Psychopathology,* C. V. Mosby Medical Book & Publishing Co., 1925.

An attempt to coördinate the teachings of the behaviorists and the Freudians. Very brilliant, suggestive and satisfactory. Over two hundred case records.

Holt, Edwin B., *The Freudian Wish,* Henry Holt & Co., 1916.

A sound, popular introduction to Freud.

Jackson and Salisbury, *Outwitting Our Nerves,* The Century Company, 1921.

A popular, but thoroughly sound book for the nervous. Contains much common sense and good advice based on excellent knowledge and much experience in psychology.

Jung, C. G., *Studies in Word Association,* Dodd, Mead & Co., 1919.

One of the greatest contributions of Jung, and an excellent introduction to the whole study of association and its uses.

Kitson, H. D., *How to Use Your Mind,* J. B. Lippincott Company, 1921. Third Edition, Revised, 1926.

A popular, but scientific aid to the better use of one's intellectual abilities.

Laird, Donald, *Increasing Personal Efficiency,* Harper & Bros., 1925.

Another of the increasing number of books for the popular reader which tell the truth so it may be understood and yet remain accurate and in accord with the facts.

Maher, Michael, *Psychology,* Longmans, Green & Co., 1921.

The standard presentation of psychology from the religious scholastic point of view.

Martin, E. D., *The Behavior of Crowds,* Harper & Bros., 1920.

The best presentation of the crowd from the Freudian point of view.

Martin, E. D., *The Mystery of Religion,* Harper & Bros., 1924.

The best presentation of religion from the Freudian point of view.

Moore, Thomas V., *Dynamic Psychology,* J. B. Lippincott Company, 1924. Second Edition, Revised, 1926.
A profound, scholarly study of the problems of modern psychology and their foundations.

Robinson and Robinson, *Readings in Psychology,* University of Chicago Press, 1923.

A large volume of compilations of significant passages from all the schools, present and past, of psychologists. An excellent test for the student who wishes to follow up and grow in his study.

Seabury, David, *Unmasking Our Minds,* Boni & Liveright, 1924.

Another excellent popular presentation of the point of view of Freud.

Stekel, W., *Conditions of Nervous Anxiety,* Dodd, Mead & Co., 1923.

A detailed treatment of the effects of psychological and mental conditions on physical and biological conduct. A book of detailed examples and analyses.

Warren, H. C., *Human Psychology,* Houghton, Mifflin & Co., 1919.

An excellent, detailed, well-illustrated text on the whole field of normal psychology. Particularly strong on the biological side. Not as popular as some of the others, but can be used as a serious text.

Watson, John B., *Psychology, From the Standpoint of a Behaviorist,* J. B. Lippincott Company, 1919. Second Edition, Revised, 1924.
The first popular presentation of Behaviorism. A stimulating and important book.

Watson, John B., *Behavior,* The People's Institute Publishing Co., 1925.

The latest presentation of behaviorism by its chief exponent. More popular than his previous writings.

Woodworth, R. S., *Psychology,* Henry Holt & Co., 1921.

Another general text, with problems and questions for class use. An excellent presentation of the whole field of normal psychology from a conservative point of view.

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